# Schedules 1A and 1B

**Northern Utilities - NEW HAMPSHIRE DIVISION**
**Simplified Market Based Allocator (SMBA) Calculations**
**DEMAND COSTS**

**NH Division Total Annual Demand Cost Allocation**

| | Resource | Costs |
|---|---|---|
| 1 | **Resource** | **Costs** |
| 2 | Pipeline & Product Demand | $ 3,732,186 |
| 3 | Storage | $ 11,124,689 |
| 4 | Peaking | $ 2,353,841 |
| 5 | Total Gross Demand Cost | $ 17,210,716 |
| 6 | | |
| 7 | Capacity Assignment Demand Revenue Estimate | $ 2,689,481 |
| 8 | NH Total Pipeline, Storage & Peaking Demand Cost | $ 17,210,716 |
| 9 | Capacity Assignment as % of Total Gross Demand Cost | 15.63% |
| 10 | | |
| 11 | NH Non-Grandfathered Transportation Allocated Capacity Assignment Costs | |
| 12 | | **Costs** |
| 13 | Pipeline & Product Demand | $ 583,221 |
| 14 | Storage | $ 1,738,431 |
| 15 | Peaking | $ 367,830 |
| 16 | Total Capacity Assignment Credit | $ 2,689,481 |
| 17 | | |
| 18 | NH Net Annual Demand Cost (Less Capacity Assignment) | |
| 19 | | **Costs** |
| 20 | Pipeline & Product Demand | $ 3,148,965 |
| 21 | Storage | $ 9,386,258 |
| 22 | Peaking | $ 1,986,012 |
| 23 | Total Net Demand Cost (Less Capacity Assignment) | $ 14,521,235 |
| 24 | | |
| 25 | **DEVELOPMENT OF BASE AND REMAINING PIPELINE DEMAND COSTS** | |
| 26 | | MMBtu/day |
| 27 | Pipeline MDQ | 16,170 |
| 28 | Less 15.63% NH Transp. Capacity Assignment | (2,527) |
| 29 | Net Pipeline MDQ | 13,643 |
| 30 | | |
| 31 | Net Pipeline MDQ | 13,643 |
| 32 | Less: Firm Sales Base Use | 4,098 |
| 33 | Remaining Pipeline MDQ | 9,545 |
| 34 | | |
| 35 | | **Unit Cost** |
| 36 | Pipeline Unit Cost | $230.81 |
| 37 | | |
| 38 | | **Costs** |
| 39 | Pipeline & Product Demand | $ 3,148,965 |
| 40 | Less: Base Pipeline Use | $ 945,913 |
| 41 | Remaining Pipeline Use | $ 2,203,052 |

| | | |
|---|---|---|
| 1 | **Resource** | |
| 2 | Pipeline & Product Demand | Schedule 21, LN 84 + Schedule 21, LN 87 |
| 3 | Storage | Schedule 21, LN 85 |
| 4 | Peaking | Schedule 21, LN 86 |
| 5 | Total Gross Demand Cost | Sum ( LN 2 : LN 4 ) |
| 6 | | |
| 7 | Capacity Assignment Demand Revenue Estimate | Schedule 5B, Page 1 |
| 8 | NH Total Pipeline, Storage & Peaking Demand Cost | LN 5 |
| 9 | Capacity Assignment as % of Total Gross Demand Cost | LN 7 / LN 8 |
| 10 | | |
| 11 | NH Non-Grandfathered Transportation Allocated Capacity Assignment Costs | |
| 12 | | |
| 13 | Pipeline & Product Demand | LN 2 * LN 9 |
| 14 | Storage | LN 3 * LN 9 |
| 15 | Peaking | LN 4 * LN 9 |
| 16 | Total Capacity Assignment Credit | Sum ( LN 13 : LN 15 ) |
| 17 | | |
| 18 | NH Net Annual Demand Cost (Less Capacity Assignment) | |
| 19 | | |
| 20 | Pipeline & Product Demand | LN 2 - LN 13 |
| 21 | Storage | LN 3 - LN 14 |
| 22 | Peaking | LN 4 - LN 15 |
| 23 | Total Net Demand Cost (Less Capacity Assignment) | LN 5 - LN 16 |
| 24 | | |
| 25 | **DEVELOPMENT OF BASE AND REMAINING PIPELINE DEMAND C** | |
| 26 | | |
| 27 | Pipeline MDQ | Company Analysis |
| 28 | Less 15.63% NH Transp. Capacity Assignment | -(LN 27) * LN 9 |
| 29 | Net Pipeline MDQ | Sum ( LN 27 : LN 28 ) |
| 30 | | |
| 31 | Net Pipeline MDQ | LN 29 |
| 32 | Less: Firm Sales Base Use | Schedule 10B, LN 48 / 10 |
| 33 | Remaining Pipeline MDQ | LN 31 - LN 32 |
| 34 | | |
| 35 | | |
| 36 | Pipeline Unit Cost | LN 20 / LN 31 |
| 37 | | |
| 38 | | |
| 39 | Pipeline & Product Demand | LN 20 |
| 40 | Less: Base Pipeline Use | LN 36 * LN 32 |
| 41 | Remaining Pipeline Use | LN 39 - LN 40 |

**Northern Utilities - NEW HAMPSHIRE DIVISION**
**Simplified Market Based Allocator (SMBA) Calculations**
**DEMAND COSTS**

42 **NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)**
43 (Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load)
44

| Line | | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|
| 45 | **All Months** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** |
| 46 | Remaining Load for All Months | 3,159,455 | 5,104,385 | 6,755,855 | 5,521,379 | 3,955,826 | 1,955,318 |
| 47 | Rank | 5 | 3 | 1 | 2 | 4 | 6 |
| 48 | % Max Month | 46.77% | 75.55% | 100.00% | 81.73% | 58.55% | 28.94% |
| 49 | PR | 3.56% | 5.67% | 18.27% | 3.09% | 2.95% | 1.41% |
| 50 | CumPR | 7.63% | 16.24% | 37.60% | 19.33% | 10.57% | 4.06% |
| 51 | | | | | | | |
| 52 | **Peak Months Only** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** |
| 53 | Remaining Load for Peak Months Only | 3,159,455 | 5,104,385 | 6,755,855 | 5,521,379 | 3,955,826 | 1,955,318 |
| 54 | Rank | 5 | 3 | 1 | 2 | 4 | 6 |
| 55 | % Max Month | 46.77% | 75.55% | 100.00% | 81.73% | 58.55% | 28.94% |
| 56 | PR | 3.56% | 5.67% | 18.27% | 3.09% | 2.95% | 4.82% |
| 57 | CumPR | 8.39% | 17.00% | 38.36% | 20.09% | 11.34% | 4.82% |

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59 **DEMAND COST PR ALLOCATORS**

| Line | | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|
| 61 | Pipeline - Base | 8.33% | 8.33% | 8.33% | 8.33% | 8.33% | 8.33% |
| 62 | Pipeline - Remaining | 7.63% | 16.24% | 37.60% | 19.33% | 10.57% | 4.06% |
| 63 | Storage & Peaking | 7.63% | 16.24% | 37.60% | 19.33% | 10.57% | 4.06% |
| 64 | Capacity Release | 8.39% | 17.00% | 38.36% | 20.09% | 11.34% | 4.82% |
| 65 | Interr. Margins & Off Sys Sales | 8.39% | 17.00% | 38.36% | 20.09% | 11.34% | 4.82% |

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67 **DEMAND COSTS ALLOCATED TO MONTHS**

| Line | | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|
| 69 | Pipeline - Base | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 |
| 70 | Pipeline - Remaining | $ 168,028 | $ 357,797 | $ 828,344 | $ 425,787 | $ 232,951 | $ 89,495 |
| 71 | Total Pipeline | $ 246,854 | $ 436,624 | $ 907,170 | $ 504,613 | $ 311,777 | $ 168,321 |
| 72 | | | | | | | |
| 73 | Storage & Peaking | $ 867,368 | $ 1,846,969 | $ 4,275,955 | $ 2,197,936 | $ 1,202,505 | $ 461,978 |
| 74 | | | | | | | |
| 75 | Less Credits to Demand Cost | | | | | | |
| 76 | Cap Rel Margins, Asset Mgt Credit | $ 285,353 | $ 578,375 | $ 1,304,943 | $ 683,358 | $ 385,600 | $ 164,091 |
| 77 | Interruptible Margins | $ - | $ - | $ - | $ - | $ - | $ - |
| 78 | Re-Entry Fee Credits | $ - | $ - | $ - | $ - | $ - | $ - |
| 79 | PNGTS Refund - Winter Only - Less PNGTS Litigation Expense | $ 384,983 | $ 819,782 | $ 1,897,894 | $ 975,559 | $ 533,735 | $ 205,050 |
| 80 | PNGTS Refund - Annual Contract | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 |
| 81 | Total Direct Demand Costs | $ 828,869 | $ 1,705,217 | $ 3,878,182 | $ 2,019,191 | $ 1,128,682 | $ 466,208 |

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| | |
|---|---|
| 83 | Indirect Demand Costs/(Credits) |
| 84 | Miscellaneous Overhead |
| 85 | Local Production & Storage |
| 86 | Subtotal |

**Northern Utilities - NEW HAMPSHIRE DIVISION**
**Simplified Market Based Allocator (SMBA) Calculations**
**DEMAND COSTS**

**NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)**
(Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load)

| **All Months** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Annual** | **Winter** | **Summer** |
|---|---|---|---|---|---|---|---|---|---|
| Remaining Load for All Months | 788,625 | 142,157 | 0 | 24,625 | 188,287 | 1,383,515 | 28,979,426 | 26,452,218 | 2,527,209 |
| Rank | 8 | 10 | 12 | 11 | 9 | 7 | | | |
| % Max Month | 11.67% | 2.10% | 0.00% | 0.36% | 2.79% | 20.48% | | | |
| PR | 1.11% | 0.17% | 0.00% | 0.03% | 0.08% | 1.26% | 37.60% | | |
| CumPR | 1.39% | 0.21% | 0.00% | 0.03% | 0.28% | 2.65% | 100.00% | 95.43% | 4.57% |

| **Peak Months Only** | **Annual** | **Winter** | **Summer** |
|---|---|---|---|
| Remaining Load for Peak Months Only | 26,452,218 | 26,452,218 | |
| Rank | | | |
| % Max Month | | | |
| PR | 38.36% | | |
| CumPR | 100.00% | 100.00% | 0.00% |

**DEMAND COST PR ALLOCATORS**

| | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Annual** | **Winter** | **Summer** |
|---|---|---|---|---|---|---|---|---|---|
| Pipeline - Base | 8.33% | 8.33% | 8.33% | 8.33% | 8.33% | 8.33% | 100.00% | 50.00% | 50.00% |
| Pipeline - Remaining | 1.39% | 0.21% | 0.00% | 0.03% | 0.28% | 2.65% | 100.00% | 95.43% | 4.57% |
| Storage & Peaking | 1.39% | 0.21% | 0.00% | 0.03% | 0.28% | 2.65% | 100.00% | 95.43% | 4.57% |
| Capacity Release | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 100.00% | 0.00% |
| Interr. Margins & Off Sys Sales | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 100.00% | 0.00% |

**DEMAND COSTS ALLOCATED TO MONTHS**

| | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Annual** | **Winter** | **Summer** | **Winter** | **Summer** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipeline - Base | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 | $ 78,826 | $ 945,913 | $ 472,956 | $ 472,956 | 50.00% | 50.00% |
| Pipeline - Remaining | $ 30,705 | $ 4,563 | $ - | $ 730 | $ 6,234 | $ 58,418 | $ 2,203,052 | $ 2,102,403 | $ 100,650 | 95.43% | 4.57% |
| Total Pipeline | $ 109,531 | $ 83,389 | $ 78,826 | $ 79,556 | $ 85,060 | $ 137,244 | $ 3,148,965 | $ 2,575,359 | $ 573,606 | 81.78% | 18.22% |
| | | | | | | | | | | | |
| Storage & Peaking | $ 158,501 | $ 23,553 | $ - | $ 3,768 | $ 32,181 | $ 301,557 | $ 11,372,270 | $ 10,852,710 | $ 519,559 | 95.43% | 4.57% |
| | | | | | | | | | | | |
| Less Credits to Demand Cost | | | | | | | | | | | |
| Cap Rel Margins, Asset Mgt Credit | $ - | $ - | $ - | $ - | $ - | $ - | $3,401,720 | $ 3,401,720 | $ - | 100.00% | 0.00% |
| Interruptible Margins | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | |
| Re-Entry Fee Credits | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | |
| PNGTS Refund - Winter Only - Less PNGTS Litigation Expense | $ 70,351 | $ 10,454 | $ - | $ 1,673 | $ 14,283 | $ 133,847 | $ 5,047,611 | $ 4,817,004 | $ 230,608 | | |
| PNGTS Refund - Annual Contract | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 | $ 10,559 | $ 126,709 | $ 63,355 | $ 63,355 | | |
| Total Direct Demand Costs | $ 268,032 | $ 106,941 | $ 78,826 | $ 83,324 | $ 117,241 | $ 438,801 | $ 5,945,194 | $ 5,145,991 | $ 799,203 | 86.56% | 13.44% |
| | | | | | | | | | | | |
| Indirect Demand Costs/(Credits) | | | | | | | | | | | |
| Miscellaneous Overhead | | | | | | | $ 512,668 | $ 394,798 | $ 117,870 | 77.01% | 22.99% |
| Local Production & Storage | | | | | | | $ 420,658 | $ 420,658 | $ - | 100.00% | 0.00% |
| Subtotal | | | | | | | $ 933,326 | $ 815,456 | $ 117,870 | 87.37% | 12.63% |

**Northern Utilities - NEW HAMPSHIRE DIVISION**
**Simplified Market Based Allocator (SMBA) Calculations**
**DEMAND COSTS**

| | | |
|---|---|---|
| 42 | **NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)** | |
| 43 | (Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load) | |
| 44 | | |
| 45 | **All Months** | |
| 46 | Remaining Load for All Months | Schedule 10B, LN 80 |
| 47 | Rank | Rank LN 46 |
| 48 | % Max Month | LN 46 / MAX Month LN 46 |
| 49 | PR | The difference between LN 48 for the month and LN 48 for next highest rank |
| 50 | CumPR | Cumulative Values, LN 49 |
| 51 | | |
| 52 | **Peak Months Only** | |
| 53 | Remaining Load for Peak Months Only | LN 46 |
| 54 | Rank | Rank LN 53 |
| 55 | % Max Month | LN 53 / MAX Month LN 53 |
| 56 | PR | The difference between LN 55 for the month and LN 55 for next highest rank |
| 57 | CumPR | Cumulative Values, LN 56 |
| 58 | | |
| 59 | **DEMAND COST PR ALLOCATORS** | |
| 60 | | |
| 61 | Pipeline - Base | 1/12 |
| 62 | Pipeline - Remaining | LN 50 |
| 63 | Storage & Peaking | LN 50 |
| 64 | Capacity Release | LN 57 |
| 65 | Interr. Margins & Off Sys Sales | LN 57 |
| 66 | | |
| 67 | **DEMAND COSTS ALLOCATED TO MONTHS** | |
| 68 | | |
| 69 | Pipeline - Base | LN 40 * LN 61 |
| 70 | Pipeline - Remaining | LN 41 * LN 62 |
| 71 | Total Pipeline | LN 69 + LN 70 |
| 72 | | |
| 73 | Storage & Peaking | LN 63 * (Sum LN 21 : LN 22) |
| 74 | | |
| 75 | Less Credits to Demand Cost | |
| 76 | Cap Rel Margins, Asset Mgt Credit | Schedule 1A, Page 6 |
| 77 | Interruptible Margins | |
| 78 | Re-Entry Fee Credits | |
| 79 | PNGTS Refund - Winter Only - Less PNGTS Litigation Expense | Schedule 25 |
| 80 | PNGTS Refund - Annual Contract | Schedule 25 |
| 81 | Total Direct Demand Costs | LN 71 + LN 73 - (Sum LN 76 : LN 78) |
| 82 | | |
| 83 | Indirect Demand Costs/(Credits) | |
| 84 | Miscellaneous Overhead | Company Analysis |
| 85 | Local Production & Storage | Company Analysis |
| 86 | Subtotal | LN 84 + LN 85 |

New Hampshire Asset Management and Capacity Release Revenue

| | | A<br>Total | B<br>Capacity Assigned | C<br>Sales | D<br>Total | E<br>Capacity Assigned | F<br>Sales |
|---|---|---|---|---|---|---|---|
| 1 | Asset Management | ($3,966,157) | $591,775 | ($3,374,382) | Schedule 21, Line 89 | Schedule 5B, Page 5 | A - B |
| 2 | Capacity Release Revenues | ($27,338) | $0 | ($27,338) | Schedule 21, Line 88 | Schedule 5B, Page 5 | A - B |
| 3 | Total NH Capacity Release and Asset Management | ($3,993,495) | $591,775 | ($3,401,720) | | | |

# Northern Utilities - NEW HAMPSHIRE DIVISION
## COMMODITY COSTS

| | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|
| | **Supply Volumes - Therms** | | | | | | | | |
| 1 | New Hampshire Sales Pipeline | 4,262,151 | 4,959,493 | 4,652,011 | 4,336,058 | 4,292,313 | 3,040,239 | 35,532,345 | 25,542,266 |
| 2 | New Hampshire Sales Storage | 44,997 | 1,389,318 | 2,424,203 | 2,354,133 | 823,441 | 0 | 7,036,092 | 7,036,092 |
| 3 | New Hampshire Sales Peaking | 8,651 | 8,958 | 950,076 | 19,660 | 56,936 | 8,331 | 1,105,762 | 1,052,612 |
| 4 | Total New Hampshire Firm Sales Sendout | 4,315,800 | 6,357,770 | 8,026,290 | 6,709,850 | 5,172,690 | 3,048,570 | 43,674,200 | 33,630,970 |
| 5 | | | | | | | | | |
| 6 | New Hampshire Interruptible Sendout (Pipeline) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | | | | | | | | |
| 8 | Total Firm Sendout | 4,315,800 | 6,357,770 | 8,026,290 | 6,709,850 | 5,172,690 | 3,048,570 | 43,674,200 | 33,630,970 |
| 9 | Total Firm Sales | 4,272,435 | 6,294,210 | 7,946,200 | 6,642,799 | 5,120,773 | 3,017,709 | 43,234,360 | 33,294,125 |
| 10 | Difference (LAUF & Company Use) | 43,365 | 63,560 | 80,090 | 67,051 | 51,917 | 30,861 | 439,840 | 336,845 |
| 11 | Percent Difference | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.01% | 1.01% | 1.00% |
| 12 | | | | | | | | | |
| 13 | **Variable Costs** | | | | | | | | |
| 14 | New Hampshire Sales Pipeline Commodity | $ 2,331,757 | $ 2,892,508 | $ 3,011,169 | $ 2,814,325 | $ 2,524,916 | $ 913,947 | $ 16,967,890 | $ 14,488,622 |
| 15 | New Hampshire Hedging (Gains) Losses | $ 11,502 | $ 18,442 | $ 23,017 | $ 17,101 | $ 13,931 | $ - | $ 83,993 | $ 83,993 |
| 16 | New Hampshire Total Storage | $ 14,879 | $ 459,389 | $ 763,736 | $ 736,404 | $ 227,807 | $ - | $ 2,202,214 | $ 2,202,214 |
| 17 | New Hampshire Total Peaking | $ 9,076 | $ 9,240 | $ 1,027,825 | $ (170,823) | $ 41,981 | $ 9,688 | $ 986,414 | $ 926,987 |
| 18 | New Hampshire Inventory Finance Charge | $ 416 | $ 672 | $ 890 | $ 727 | $ 521 | $ 257 | $ 3,483 | $ 3,483 |
| 19 | Total New Hampshire Sales Variable Costs | $ 2,367,630 | $ 3,380,251 | $ 4,826,637 | $ 3,397,734 | $ 2,809,156 | $ 923,892 | $ 20,243,994 | $ 17,705,300 |
| 20 | Total New Hampshire Sales Variable Costs Excld Hedges | $ 2,356,127 | $ 3,361,809 | $ 4,803,620 | $ 3,380,633 | $ 2,795,225 | $ 923,892 | $ 20,160,001 | $ 17,621,306 |
| 21 | | | | | | | | $ - | $ - |
| 22 | New Hampshire Interruptible Commodity Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 23 | Total New Hampshire Commodity Costs | $ 2,367,630 | $ 3,380,251 | $ 4,826,637 | $ 3,397,734 | $ 2,809,156 | $ 923,892 | $ 20,243,994 | $ 17,705,300 |
| 24 | | | | | | | | | |
| 25 | **Supply Cost/Therm** | | | | | | | | |
| 26 | New Hampshire Sales Pipeline Commodity Excld Hedges | $ 0.5471 | $ 0.5832 | $ 0.6473 | $ 0.6491 | $ 0.5882 | $ 0.3006 | $ 0.4775 | $ 0.5672 |
| 27 | New Hampshire Hedging (Gains) Losses | $ 0.0027 | $ 0.0037 | $ 0.0049 | $ 0.0039 | $ 0.0032 | $ - | $ 0.0024 | $ 0.0033 |
| 28 | New Hampshire Storage Excld Inventory Finance Costs | $ 0.3307 | $ 0.3307 | $ 0.3150 | $ 0.3128 | $ 0.2767 | $ - | $ 0.3130 | $ 0.3130 |
| 29 | New Hampshire Peaking Excld Inventory Finance Costs | $ 1.0491 | $ 1.0315 | $ 1.0818 | $ (8.6891) | $ 0.7373 | $ 1.1630 | $ 0.8921 | $ 0.8807 |
| 30 | New Hampshire Inventory Finance Costs per Dth Stor and Peak | $ 0.0078 | $ 0.0005 | $ 0.0003 | $ 0.0003 | $ 0.0006 | $ 0.0309 | $ 0.0004 | $ 0.0004 |
| 31 | Weighted Average Cost per Dth Sendout | $ 0.5486 | $ 0.5317 | $ 0.6014 | $ 0.5064 | $ 0.5431 | $ 0.3031 | $ 0.4635 | $ 0.5265 |
| 32 | | | | | | | | | |
| 33 | New Hampshire Interruptible Cost / Therm | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 34 | | | | | | | | | |
| 35 | **Commodity Costs** | | | | | | | | |
| 36 | Base Commodity, therms | 1,156,345 | 1,253,385 | 1,270,435 | 1,188,471 | 1,216,864 | 1,093,252 | 14,694,774 | 7,178,752 |
| 37 | Base Commodity Cost Excld Hedging | $ 632,618 | $ 731,007 | $ 822,331 | $ 771,379 | $ 715,810 | $ 328,650 | $ 5,827,919 | $ 4,001,796 |
| 38 | Base Hedging Commodity Cost | $ 3,121 | $ 4,661 | $ 6,286 | $ 4,687 | $ 3,949 | $ - | $ 22,704 | $ 22,704 |
| 39 | Remaining Commodity Excld Hedging | $ 1,723,509 | $ 2,630,801 | $ 3,981,288 | $ 2,609,254 | $ 2,079,415 | $ 595,242 | $ 14,332,082 | $ 13,619,510 |
| 40 | Remaining Hedging Commodity | $ 8,382 | $ 13,781 | $ 16,731 | $ 12,413 | $ 9,982 | $ - | $ 61,289 | $ 61,289 |
| 41 | Total Commodity Excld Hedging | $ 2,356,127 | $ 3,361,809 | $ 4,803,620 | $ 3,380,633 | $ 2,795,225 | $ 923,892 | $ 20,160,001 | $ 17,621,306 |
| 42 | Total Hedging | $ 11,502 | $ 18,442 | $ 23,017 | $ 17,101 | $ 13,931 | $ - | $ 83,993 | $ 83,993 |
| 43 | Total Commodity (Incl Hedging) | $ 2,367,630 | $ 3,380,251 | $ 4,826,637 | $ 3,397,734 | $ 2,809,156 | $ 923,892 | $ 20,243,994 | $ 17,705,300 |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## COMMODITY COSTS

| | | |
|---|---|---|
| | **Supply Volumes - Therms** | |
| 1 | New Hampshire Sales Pipeline | Schedule 22, LN 10 * LN 59 * 10 |
| 2 | New Hampshire Sales Storage | Schedule 22, LN 3 * LN 59 * 10 |
| 3 | New Hampshire Sales Peaking | Schedule 22, LN 4 * LN 59 * 10 |
| 4 | Total New Hampshire Firm Sales Sendout | Sum LN 1 : LN 3 |
| 5 | | |
| 6 | New Hampshire Interruptible Sendout (Pipeline) | Schedule 22, LN 8 * 10 |
| 7 | | |
| 8 | Total Firm Sendout | LN 4 |
| 9 | Total Firm Sales | Schedule 10B, LN 11 |
| 10 | Difference (LAUF & Company Use) | LN 8 - LN 9 |
| 11 | Percent Difference | LN 10 / LN 8 |
| 12 | | |
| 13 | **Variable Costs** | |
| 14 | New Hampshire Sales Pipeline Commodity | Schedule 22, LN 73 |
| 15 | New Hampshire Hedging (Gains) Losses | Schedule 22, LN 74 |
| 16 | New Hampshire Total Storage | Schedule 22, LN 75 |
| 17 | New Hampshire Total Peaking | Schedule 22, LN 76 |
| 18 | New Hampshire Inventory Finance Charge | Schedule 22, LN 79 |
| 19 | Total New Hampshire Sales Variable Costs | Sum LN 14 : LN 18 |
| 20 | Total New Hampshire Sales Variable Costs Excld Hedges | LN 19 - LN 15 |
| 21 | | |
| 22 | New Hampshire Interruptible Commodity Costs | Schedule 22, LN 77 |
| 23 | Total New Hampshire Commodity Costs | LN 19 |
| 24 | | |
| 25 | **Supply Cost/Therm** | |
| 26 | New Hampshire Sales Pipeline Commodity Excld Hedges | LN 14 / LN 1 |
| 27 | New Hampshire Hedging (Gains) Losses | LN 15 / LN 1 |
| 28 | New Hampshire Storage Excld Inventory Finance Costs | LN 16 / LN 2 |
| 29 | New Hampshire Peaking Excld Inventory Finance Costs | LN 17 / LN 3 |
| 30 | New Hampshire Inventory Finance Costs per Dth Stor and Peak | LN 18 / Sum ( LN 2 : LN 3 ) |
| 31 | Weighted Average Cost per Dth Sendout | LN 19 / LN 8 |
| 32 | | |
| 33 | New Hampshire Interruptible Cost / Therm | LN 22 / LN 6 |
| 34 | | |
| 35 | **Commodity Costs** | |
| 36 | Base Commodity, therms | Schedule 10B, LN 64 |
| 37 | Base Commodity Cost Excld Hedging | Min (LN 26 * LN 36), LN 19 |
| 38 | Base Hedging Commodity Cost | Min (LN 27 * LN 36), (LN 19 - LN 37) |
| 39 | Remaining Commodity Excld Hedging | LN 20 - LN 37 |
| 40 | Remaining Hedging Commodity | LN 15 - LN 38 |
| 41 | Total Commodity Excld Hedging | LN 37 + LN 39 |
| 42 | Total Hedging | LN 38 + LN 40 |
| 43 | Total Commodity (Incl Hedging) | LN 41 + LN 42 |

# Schedule 2

# REDACTED



Estimated Delivered City-Gate Commodity Costs and Volumes
Net Storage

Denotes Confidential Information

| Supply Source | Delivered City-Gate Costs | Delivered City-Gate Volumes | Delivered Cost per Dth |
|---|---|---|---|
| Tennessee Storage | [redacted] | 209,113 | [redacted] |
| Tenn Zone 4 Spot | [redacted] | 232,348 | [redacted] |
| Tennessee Production | [redacted] | 2,100,379 | [redacted] |
| Washington 10 Storage | [redacted] | 2,253,395 | [redacted] |
| Niagara | [redacted] | 375,348 | [redacted] |
| Chicago | [redacted] | 887,024 | [redacted] |
| TGP Zone 6 | [redacted] | 136,212 | [redacted] |
| Algonquin Receipts | [redacted] | 190,152 | [redacted] |
| Iroquois Receipts | [redacted] | 92,894 | [redacted] |
| Peaking Contract 4 | [redacted] | 239,160 | [redacted] |
| PNGTS Receipts | [redacted] | 151,069 | [redacted] |
| PNGTS Delivered | [redacted] | 838,057 | [redacted] |
| Maritimes Delivered | [redacted] | 1,200,000 | [redacted] |
| PNGTS Delivered (Dec - Feb) | [redacted] | 226,704 | [redacted] |
| LNG | [redacted] | 50,277 | [redacted] |
| Peaking Contract 3 | [redacted] | 52,332 | [redacted] |
| Peaking Contract 2 | [redacted] | 88,658 | [redacted] |
| Peaking Contract 1 | [redacted] | 12,636 | [redacted] |
| Total Delivered Commodity Cost | $49,323,457 | 9,335,756 | $5.283 |

# Schedules 3

## Peak Period

**Northern Utilities**

**NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation**

| | | | Summer | | | | | | Winter | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sales Revenues** | | | | | | | | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | |
| 1 | Volumes | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Total |
| 2 | Residential Heat & Non Heat | | | | | | | | 1,921,947 | 2,831,438 | 3,574,582 | 2,988,250 | 2,303,570 | 1,357,510 | 14,977,297 |
| 3 | Sales HLF Classes | | | | | | | | 415,742 | 612,477 | 773,229 | 646,397 | 498,292 | 293,647 | 3,239,784 |
| 4 | Sales LLF Classes | | | | | | | | 1,934,746 | 2,850,295 | 3,598,389 | 3,008,152 | 2,318,911 | 1,366,551 | 15,077,044 |
| 5 | Total | | | | | | | | 4,272,435 | 6,294,210 | 7,946,200 | 6,642,799 | 5,120,773 | 3,017,709 | 33,294,125 |
| 6 | Rates | | | | | | | | | | | | | | |
| 7 | Residential Heat & Non Heat CGA | | | | | | | | $0.6570 | $0.6570 | $0.6570 | $0.6570 | $0.6570 | $0.6570 | |
| 8 | Sales HLF Classes CGA | | | | | | | | $0.6462 | $0.6462 | $0.6462 | $0.6462 | $0.6462 | $0.6462 | |
| 9 | Sales LLF Classes CGA | | | | | | | | $0.6616 | $0.6616 | $0.6616 | $0.6616 | $0.6616 | $0.6616 | |
| 10 | Revenues | | | | | | | | | | | | | | |
| 11 | Residential Heat & Non Heat | | | | | | | | $ (1,262,719) | $ (1,860,255) | $ (2,348,501) | $ (1,963,280) | $ (1,513,445) | $ (891,884) | $ (9,840,084) |
| 12 | Sales HLF Classes | | | | | | | | $ (268,653) | $ (395,783) | $ (499,660) | $ (417,702) | $ (321,996) | $ (189,755) | $ (2,093,549) |
| 13 | Sales LLF Classes | | | | | | | | $ (1,280,028) | $ (1,885,755) | $ (2,380,694) | $ (1,990,193) | $ (1,534,192) | $ (904,110) | $ (9,974,972) |
| 14 | Total Sales Revenues | | | | | | | | $ (2,811,400) | $ (4,141,792) | $ (5,228,855) | $ (4,371,176) | $ (3,369,633) | $ (1,985,749) | $(21,908,605) |
| 15 | | | | | | | | | | | | | | | |

| 16 | | | Summer | | | | | | Winter | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | **Gas Costs and Credits** | | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | |
| 18 | | | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Total |
| 19 | Net Demand Costs (Net of Injection Fees & Cap. Assign.) | | | | | | | | | | | | | | |
| 20 | Pipeline | | $ 214,118 | $ 214,118 | $ 214,118 | $ 216,099 | $ 216,099 | $ 216,099 | $ 214,118 | $ 214,118 | $ 214,118 | $ 214,118 | $ 214,118 | $ 214,118 | $ 2,575,359 |
| 21 | Storage | | $ 503,439 | $ 503,439 | $ 503,439 | $ 505,590 | $ 505,590 | $ 505,590 | $ 1,085,382 | $ 1,085,382 | $ 1,085,382 | $ 1,085,382 | $ 1,085,382 | $ 503,439 | $ 8,957,433 |
| 22 | Peaking | | $ 14,650 | $ 14,650 | $ 14,650 | $ 15,284 | $ 15,284 | $ 15,284 | $ 349,636 | $ 349,636 | $ 349,636 | $ 349,636 | $ 349,636 | $ 57,296 | $ 1,895,278 |
| 23 | Total Demand Costs | | $ 732,207 | $ 732,207 | $ 732,207 | $ 736,973 | $ 736,973 | $ 736,973 | $ 1,649,136 | $ 1,649,136 | $ 1,649,136 | $ 1,649,136 | $ 1,649,136 | $ 774,852 | $ 13,428,069 |
| 24 | NUI Commodity Costs | | | | | | | | | | | | | | |
| 25 | NUI Total Pipeline Volumes | | | | | | | | 1,050,509 | 1,219,835 | 1,156,065 | 1,070,794 | 1,067,603 | 777,347 | 6,342,153 |
| 26 | Pipeline Costs Modeled in Sendout™ | | | | | | | | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 35,911,509 |
| 27 | NYMEX Price Used for Forecast | | | | | | | | $ 2.7410 | $ 2.8970 | $ 3.0070 | $ 3.0100 | $ 2.9770 | $ 2.8430 | |
| 28 | NYMEX Price Used for Update | | | | | | | | $ 2.7410 | $ 2.8970 | $ 3.0070 | $ 3.0100 | $ 2.9770 | $ 2.8430 | |
| 29 | Increase/(Decrease) NYMEX Price | | | | | | | | $ - | $ - | $ - | $ - | $ - | $ - | |
| 30 | Increase/(Decrease) in Pipeline Costs | | | | | | | | $ - | $ - | $ - | $ - | $ - | $ - | |
| 31 | Updated Pipeline Costs | | | | | | | | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | |
| 32 | Interruptible Volumes - NH | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | |
| 33 | Average Supply Cost ($/MMBtu) | | | | | | | | $ 5.47 | $ 5.83 | $ 6.47 | $ 6.49 | $ 5.88 | $ 3.01 | |
| 34 | Interruptible Cost - NH | | | | | | | | $ - | $ - | $ - | $ - | $ - | $ - | |
| 35 | Total Updated Pipeline Costs | | | | | | | | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | |
| 36 | New Hampshire Allocated Percentage | | | | | | | | 40.57% | 40.66% | 40.24% | 40.49% | 40.21% | 39.11% | |
| 37 | NH Updated Pipeline Costs | | | | | | | | $ 2,331,757 | $ 2,892,508 | $ 3,011,169 | $ 2,814,325 | $ 2,524,916 | $ 913,947 | $ 14,488,622 |
| 38 | Hedging (Gain)/Loss Estimate | | | | | | | | | | | | | | |
| 39 | NYMEX Options Contracts | | | | | | | | | | | | | | |
| 40 | Number of Contracts | | | | | | | | 27 | 42 | 52 | 41 | 33 | 0 | |
| 41 | Option Contract Price | | | | | | | | $ 0.1050 | $ 0.1080 | $ 0.1100 | $ 0.1030 | $ 0.1050 | $ - | |
| 42 | Hedging Expenses | | | | | | | | $28,350 | $45,360 | $57,200 | $42,230 | $34,650 | $0 | $207,790 |
| 43 | NYMEX Option Strike Price | | | | | | | | $ 5.7000 | $ 6.0000 | $ 6.5000 | $ 6.2500 | $ 6.5000 | $ - | |
| 44 | NYMEX Price Used for Forecast | | | | | | | | 2.7410 | 2.8970 | 3.0070 | 3.0100 | 2.9770 | 2.8430 | |
| 45 | Strike Price Hit | | | | | | | | No | No | No | No | No | $ - | $ - |
| 46 | Option Hedging Gain (Credit) | | | | | | | | $0 | $0 | $0 | $0 | $0 | $0 | |
| 50 | NH Commodity Costs | | | | | | | | | | | | | | |
| 51 | Pipeline Excl Hedging | | | | | | | | $ 2,331,757 | $ 2,892,508 | $ 3,011,169 | $ 2,814,325 | $ 2,524,916 | $ 913,947 | $ 14,488,622 |
| 52 | Hedging (Gain)/Loss Estimate | | | | | | | | $11,502 | $18,442 | $23,017 | $17,101 | $13,931 | $0 | $ 83,993 |
| 53 | Storage | | | | | | | | $ 14,879 | $ 459,389 | $ 763,736 | $ 736,404 | $ 227,807 | $ - | $ 2,202,214 |
| 54 | Peaking | | | | | | | | $ 9,076 | $ 9,240 | $ 1,027,825 | $ (170,823) | $ 41,981 | $ 9,688 | $ 926,987 |
| 55 | Total Commodity Costs | | | | | | | | $ 2,367,214 | $ 3,379,579 | $ 4,825,748 | $ 3,397,007 | $ 2,808,635 | $ 923,635 | $ 17,701,817 |
| 56 | Inventory Finance Charge | | $ 194 | $ 242 | $ 282 | $ 327 | $ 348 | $ 377 | $ 384 | $ 384 | $ 348 | $ 270 | $ 176 | $ 150 | $ 3,483 |
| 57 | Asset Management and Capacity Release | | | | | | | | | | | | | | |
| 58 | NUI AMA Revenue | | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | $ (797,083) | ($9,565,000) |
| 59 | NUI Capacity Release | | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (5,416) | $ (64,987) |
| 60 | NUI AMA Rev & Cap. Release Subtotal | | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (802,499) | $ (9,629,987) |
| 61 | NH AMA Revenue | | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | $ (281,198) | ($3,374,382) |
| 62 | NH Capacity Release | | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | $ (2,278) | ($27,338) |
| 63 | NH Total Asset Management and Capacity Release | | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (283,477) | $ (3,401,720) |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 | **Total Anticipated Direct Cost of Gas** | | $ 448,924 | $ 448,972 | $ 449,012 | $ 453,823 | $ 453,844 | $ 453,873 | $ 2,919,864 | $ 3,932,229 | $ 5,378,362 | $ 3,949,542 | $ 3,361,078 | $ 601,768 | $ 22,851,291 |
| 69 | | | Winter | | | | | | Summer | | | | | | |
| 70 | | | | | | | | | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | (Forecast) | |
| 71 | | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Total |
| 72 | Working Capital | | | | | | | | | | | | | | |
| 73 | Total Anticipated Direct Cost of Gas | | $ 448,924 | $ 448,972 | $ 449,012 | $ 453,823 | $ 453,844 | $ 453,873 | $ 2,919,864 | $ 3,932,229 | $ 5,378,362 | $ 3,949,542 | $ 3,361,078 | $ 601,768 | $ 22,851,291 |
| 74 | Working Capital Percentage | | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.08% | 0.0824% | |
| 75 | Working Capital Allowance | | $ 370 | $ 370 | $ 370 | $ 374 | $ 374 | $ 374 | $ 2,405 | $ 3,239 | $ 4,430 | $ 3,253 | $ 2,768 | $ 496 | $ 18,821 |
| 76 | Beginning Period Working Capital Balance | | $ (3,542) | $ (3,181) | $ (2,820) | $ (2,457) | $ (2,089) | $ (1,721) | $ (1,351) | $ 1,053 | $ 4,299 | $ 8,747 | $ 12,028 | $ 14,832 | |
| 77 | End of Period Working Capital Allowance | | $ (3,172) | $ (2,812) | $ (2,450) | $ (2,083) | $ (1,716) | $ (1,347) | $ 1,054 | $ 4,292 | $ 8,729 | $ 12,000 | $ 14,796 | $ 15,328 | |
| 78 | Interest | | $ (9) | $ (8) | $ (7) | $ (6) | $ (5) | $ (4) | $ (0) | $ 7 | $ 18 | $ 28 | $ 36 | $ 41 | $ 90 |
| 79 | End of period with Interest | $ (3,542) | $ (3,181) | $ (2,820) | $ (2,457) | $ (2,089) | $ (1,721) | $ (1,351) | $ 1,053 | $ 4,299 | $ 8,747 | $ 12,028 | $ 14,832 | $ 15,369 | |
| 80 | Bad Debt | | | | | | | | | | | | | | |
| 81 | | | | | | | | | | | | | | | $ - |
| 82 | Bad Debt Allowance | | | | | | | | $ 41,850.00 | $ 41,850.00 | $ 41,850.00 | $ 41,850.00 | $ 41,850.00 | $ 41,850.00 | $ 251,100 |
| 83 | Beginning Period Bad Debt Balance | | $ (62,204) | $ (62,372) | $ (62,541) | $ (62,711) | $ (62,881) | $ (63,051) | $ (63,222) | $ (21,486) | $ 20,362 | $ 62,324 | $ 104,400 | $ 146,589 | |
| 84 | End of Period Bad Debt Balance | | $ (62,204) | $ (62,372) | $ (62,541) | $ (62,711) | $ (62,881) | $ (63,051) | $ (21,372) | $ 20,364 | $ 62,212 | $ 104,174 | $ 146,250 | $ 188,439 | |
| 85 | Interest | | $ (168) | $ (169) | $ (169) | $ (170) | $ (170) | $ (171) | $ (115) | $ (2) | $ 112 | $ 225 | $ 339 | $ 454 | $ (3) |
| 86 | End of Period Bad Debt Balance with Interest | $ (62,204) | $ (62,372) | $ (62,541) | $ (62,711) | $ (62,881) | $ (63,051) | $ (63,222) | $ (21,486) | $ 20,362 | $ 62,324 | $ 104,400 | $ 146,589 | $ 188,893 | |
| 87 | Local Production and Storage Capacity | | | | | | | | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | $ 420,658 |
| 88 | Miscellaneous Overhead | | | | | | | | $ 65,800 | $ 65,800 | $ 65,800 | $ 65,800 | $ 65,800 | $ 65,800 | $ 394,798 |
| 90 | Gas Cost Other than Bad Debt and Working Capital Over/Under Collection | | | | | | | | | | | | | | |
| 91 | Beginning Balance Over/Under Collection | | $ (2,001,586) | $ (1,557,475) | $ (1,112,113) | $ (665,505) | $ (212,870) | $ 241,013 | $ 696,153 | $ 942,743 | $ 871,542 | $ 1,159,705 | $ 876,735 | $ 1,006,636 | |
| 92 | Net Costs - Revenues | | $ 448,924 | $ 448,972 | $ 449,012 | $ 453,823 | $ 453,844 | $ 453,873 | $ 244,373 | $ (73,654) | $ 285,416 | $ (285,724) | $ 127,354 | $ (1,248,073) | |
| 93 | Ending Balance before Interest | | $ (1,552,662) | $ (1,108,503) | $ (663,101) | $ (211,682) | $ 240,974 | $ 694,886 | $ 940,526 | $ 869,089 | $ 1,156,959 | $ 873,982 | $ 1,004,089 | $ (241,436) | |
| 94 | Average Balance | | $ (1,777,124) | $ (1,332,989) | $ (887,607) | $ (438,594) | $ 14,052 | $ 467,949 | $ 818,340 | $ 905,916 | $ 1,014,250 | $ 1,016,843 | $ 940,412 | $ 382,600 | |
| 95 | Interest Rate | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | |
| 96 | Interest Expense | | $ (4,813) | $ (3,610) | $ (2,404) | $ (1,188) | $ 38 | $ 1,267 | $ 2,216 | $ 2,454 | $ 2,747 | $ 2,754 | $ 2,547 | $ 1,036 | $ 3,044 |
| 97 | Ending Balance Incl Interest Expense | $ (2,001,586) | $ (1,557,475) | $ (1,112,113) | $ (665,505) | $ (212,870) | $ 241,013 | $ 696,153 | $ 942,743 | $ 871,542 | $ 1,159,705 | $ 876,735 | $ 1,006,636 | $ (240,400) | |
| 98 | **Total Over/Under Collection Ending Balance** | | $ (1,623,029) | $ (1,177,474) | $ (730,673) | $ (277,840) | $ 176,241 | $ 631,580 | $ 922,310 | $ 896,204 | $ 1,230,776 | $ 993,163 | $ 1,168,058 | $ (36,138) | |
| 99 | | | | | | | | | | | | | | | $ - |
| 100 | | | | | | | | | | | | | | | |
| 101 | **Total Indirect Cost of Gas** | $ (2,067,332) | $ (4,621) | $ (3,417) | $ (2,211) | $ (990) | $ 236 | $ 1,466 | $ 182,266 | $ 183,457 | $ 185,065 | $ 184,020 | $ 183,450 | $ 179,786 | $ (978,824) |
| 102 | | | | | | | | | | | | | | | |
| 103 | **Total Cost of Gas** | $ (2,067,332) | $ 444,303 | $ 445,554 | $ 446,802 | $ 452,833 | $ 454,081 | $ 455,339 | $ 3,102,129 | $ 4,115,686 | $ 5,563,427 | $ 4,133,562 | $ 3,544,528 | $ 781,553 | $ 21,872,467 |
| 104 | | | | | | | | | | | | | | | |
| 105 | **Total Interest** | $ - | $ (4,991) | $ (3,787) | $ (2,580) | $ (1,364) | $ (137) | $ 1,092 | $ 2,101 | $ 2,459 | $ 2,876 | $ 3,008 | $ 2,923 | $ 1,531 | $ 3,131 |

# Schedules 4

Northern Utilities Inc.
Calculation of Bad Debt Expense

| | | | | |
|---|---|---|---|---|
| 1 | **Actual Bad Debt Expense 12 Months Ended July 31, 2015** | | | |
| 2 | | | | |
| 3 | Total | $ | 528,616 | Company Analysis |
| 4 | Distribution | $ | 245,364 | Company Analysis |
| 5 | Distribution (%) | | 46.00% | |
| 6 | Non-Distribution | $ | 283,251 | Company Analysis |
| 7 | Non-Distribution(%) | | 54.00% | LN 6 / LN 3 |
| 8 | | | | |
| 9 | Non-Distribution | $ | 283,251 | LN 6 |
| 10 | Peak Period | $ | 262,427 | Company Analysis |
| 11 | Peak Period (%) | | 93.00% | LN 10/ LN 9 |
| 12 | Off-Peak Period | $ | 20,824 | LN 9 - LN 10 |
| 13 | Off-Peak Period (%) | | 7.00% | LN 12 / LN 9 |
| 14 | | | | |
| 15 | **Forecast Bad Debt Expense 12 Months Ended December 31, 2016** | | | |
| 16 | | | | |
| 17 | Annual Total | $ | 500,000 | Company Forecast |
| 18 | Annual Non-Distribution | $ | 270,000 | LN 17* LN 7 |
| 19 | Winter Non-Distribution | **$** | **251,100** | LN 18* LN 11 |
| 20 | Summer Non-Distribution | $ | 18,900 | LN 18* LN 13 |

# Schedule 5A, Attachment to Schedule 5A & Schedule 5B

| Northern Utilities, Inc.<br>Estimated Gas Supply Demand Costs<br>November 1, 2015 through October 31, 2016 | | | |
|---|---|---|---|
| Line | Description | Estimate | Reference |
| 1. | Pipeline Demand Costs | $ 9,154,859 | Schedule 5A, Page 3 - Pipeline Allocated Cost |
| 2. | Storage Allocated Pipeline Demand Costs | $ 23,128,453 | Schedule 5A, Page 3 - Storage Allocated Cost |
| 3. | Storage Demand Costs | $ 3,029,855 | Schedule 5A, Page 4 - Annual Fixed Charges |
| 4. | Peaking Allocated Pipeline Demand Costs | $ 1,252,642 | Schedule 5A, Page 3 - Peaking Allocated Cost |
| 5. | Peaking Contract Costs | $ 4,223,000 | Schedule 5A, Page 5, Annual Fixed Charges |
| 6. | Asset Management and Capacity Release Revenue | $ (9,629,987) | Schedule 5A, Page 6 - Total Asset Management and Capacity Release Revenue |
| 7. | Total Demand Costs | $ 31,158,821 | Sum Lines 1 through 6. |

Northern Utilities, Inc.

Pipeline Contract Demand Cost Estimates

November 1, 2015 through October 31, 2016

| Pipeline | Contract ID | Rate | Negotiated Rate | MDQ (Dth) | Receipt Zone | Delivery Zone | Demand Rate ($/MDQ) | Months Per Year | Support for Demand Rate | Monthly Demand | Annual Demand |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Algonquin | 93002F | AFT-1 (AFT-2) | No | 4,211 | Mendon, MA | Brockton, MA | $ 6.1138 | 12 | Line 1 of Page 2, Att to Sch 5A | $ 25,745 | $ 308,943 |
| Algonquin | 93201A1C | AFT-1 (F-2/F-3) | No | 1,251 | Centerville, NJ | Taunton, MA | $ 6.5734 | 12 | Line 2 of Page 2, Att to Sch 5A | $ 8,223 | $ 98,680 |
| Granite | 16-100-FT-NN | FT-NN | No | 115,000 | NA | NA | $ 4.1069 | 6 | Line 3 of Page 2, Att to Sch 5A | $ 472,294 | $ 2,833,761 |
| Granite | 16-100-FT-NN | FT-NN | No | 85,000 | NA | NA | $ 4.1069 | 3 | Line 3 of Page 2, Att to Sch 5A | $ 349,087 | $ 1,047,260 |
| Granite | 16-100-FT-NN | FT-NN | No | 85,000 | NA | NA | $ 4.2845 | 3 | Line 3 of Page 2, Att to Sch 5A | $ 364,183 | $ 1,092,548 |
| Iroquois | R181001 | RTS-1 | No | 6,569 | Zone 1 | Zone 1 | $ 6.5971 | 12 | Line 4 of Page 2, Att to Sch 5A | $ 43,336 | $ 520,036 |
| PNGTS | 1997-003 | FT | No | 1,100 | Pittsburgh | GSGT | $ 25.9843 | 12 | Line 5 of Page 2, Att to Sch 5A | $ 28,583 | $ 342,993 |
| PNGTS | 1997-004 | FT | Yes | 33,000 | Pittsburgh | GSGT | $ 49.3701 | 5 | Line 6 of Page 2, Att to Sch 5A | $ 1,629,213 | $ 8,146,067 |
| Tennessee | 5083 | FT-A | No | 4,605 | Zone 0 | Zone 6 | $ 23.2362 | 12 | Line 7 of Page 2, Att to Sch 5A | $ 107,003 | $ 1,284,032 |
| Tennessee | 5083 | FT-A | No | 8,550 | Zone L | Zone 6 | $ 20.6281 | 12 | Line 8 of Page 2, Att to Sch 5A | $ 176,370 | $ 2,116,443 |
| Tennessee | 5265 | FT-A | No | 2,653 | Zone 4 | Zone 6 | $ 8.1668 | 12 | Line 9 of Page 2, Att to Sch 5A | $ 21,667 | $ 259,998 |
| Tennessee | 5292 | FT-A | No | 1,406 | Zone 5 | Zone 6 | $ 7.1756 | 12 | Line 10 of Page 2, Att to Sch 5A | $ 10,089 | $ 121,067 |
| Tennessee | 31861 | FT-A | No | 2,226 | Zone 5 | Zone 6 | $ 7.1756 | 12 | Line 10 of Page 2, Att to Sch 5A | $ 15,973 | $ 191,675 |
| Tennessee | 39735 | FT-A | No | 929 | Zone 5 | Zone 6 | $ 7.1756 | 12 | Line 10 of Page 2, Att to Sch 5A | $ 6,666 | $ 79,994 |
| Tennessee | 41099 | FT-A | No | 4,267 | Zone 5 | Zone 6 | $ 7.1756 | 12 | Line 10 of Page 2, Att to Sch 5A | $ 30,618 | $ 367,419 |
| Texas Eastern | 800384 | FT-1 | No | 965 | M3 | M3 | $ 5.6120 | 12 | Line 11 of Page 2, Att to Sch 5A | $ 5,416 | $ 64,987 |
| TransCanada | 33322 | FT | No | 34,000 | Dawn | E. Hereford | $ 26.9504 | 12 | Line 12 of Page 2, Att to Sch 5A | $ 916,314 | $ 10,995,763 |
| TransCanada | 29594 | FT | No | 5,937 | Parkway | Iroquois | $ 13.4241 | 12 | Line 13 of Page 2, Att to Sch 5A | $ 79,699 | $ 956,387 |
| Union | M12205 | M12 | No | 6,003 | Dawn | Parkway | $ 2.1759 | 12 | Line 14 of Page 2, Att to Sch 5A | $ 13,062 | $ 156,743 |
| Vector | CRL-NUI-0725 | FT-1 | Yes | 17,172 | Alliance | Dawn | $ 7.6042 | 12 | Line 15 of Page 2, Att to Sch 5A | $ 130,579 | $ 1,566,952 |
| Vector | CRL-NUI-0727 | FT-1 | Yes | 17,086 | W-10 | Dawn | $ 4.5625 | 5 | Line 16 of Page 2, Att to Sch 5A | $ 77,955 | $ 389,774 |
| Vector | FT-1-NUI-0122 | FT-1 | Yes | 6,070 | Alliance | St. Clair | $ 7.7745 | 12 | Line 17 of Page 2, Att to Sch 5A | $ 47,191 | $ 566,295 |
| Vector | FT-1-NUI-C0122 | FT-1 | Yes | 6,070 | St. Clair | Dawn | $ 0.3863 | 12 | Line 18 of Page 2, Att to Sch 5A | $ 2,345 | $ 28,138 |

Total Annual Demand Costs $ 33,535,953

Northern Utilities, Inc.

Pipeline Contract Demand Cost Allocations

November 1, 2015 through October 31, 2016

| Pipeline | Contract ID | MDQ | Pipeline MDQ | Storage MDQ | Peaking MDQ | Pipeline % | Storage % | Peaking % | Annual Demand | Annual Pipeline Allocated Cost | Annual Storage Allocated Cost | Annual Peaking Allocated Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Algonquin | 93002F | 4,211 | 4,211 | | | 100% | 0% | 0% | $ 308,943 | $ 308,943 | $ - | $ - |
| Algonquin | 93201A1C | 1,251 | 1,251 | | | 100% | 0% | 0% | $ 98,680 | $ 98,680 | $ - | $ - |
| Granite | 16-100-FT-NN | 115,000 | 39,165 | 35,529 | 40,306 | 34% | 31% | 35% | $ 2,833,761 | $ 965,080 | $ 875,484 | $ 993,196 |
| Granite | 16-100-FT-NN | 85,000 | 39,165 | 35,529 | 10,306 | 46% | 42% | 12% | $ 1,047,260 | $ 482,540 | $ 437,742 | $ 126,977 |
| Granite | 16-100-FT-NN | 85,000 | 39,165 | 35,529 | 10,306 | 46% | 42% | 12% | $ 1,092,548 | $ 503,407 | $ 456,672 | $ 132,468 |
| Iroquois | R181001 | 6,569 | 6,569 | | | 100% | 0% | 0% | $ 520,036 | $ 520,036 | $ - | $ - |
| PNGTS | 1997-003 | 1,100 | 1,100 | | | 100% | 0% | 0% | $ 342,993 | $ 342,993 | $ - | $ - |
| PNGTS | 1997-004 | 33,000 | | 33,000 | | 0% | 100% | 0% | $ 8,146,067 | $ - | $ 8,146,067 | $ - |
| Tennessee | 5083 | 4,605 | 4,605 | | | 100% | 0% | 0% | $ 1,284,032 | $ 1,284,032 | $ - | $ - |
| Tennessee | 5083 | 8,550 | 8,550 | | | 100% | 0% | 0% | $ 2,116,443 | $ 2,116,443 | $ - | $ - |
| Tennessee | 5265 | 2,653 | | 2,653 | | 0% | 100% | 0% | $ 259,998 | $ - | $ 259,998 | $ - |
| Tennessee | 5292 | 1,406 | 1,406 | - | | 100% | 0% | 0% | $ 121,067 | $ 121,067 | $ - | $ - |
| Tennessee | 31861 | 2,226 | 2,226 | | | 100% | 0% | 0% | $ 191,675 | $ 191,675 | $ - | $ - |
| Tennessee | 39735 | 929 | 929 | - | | 100% | 0% | 0% | $ 79,994 | $ 79,994 | $ - | $ - |
| Tennessee | 41099 | 4,267 | 4,267 | - | | 100% | 0% | 0% | $ 367,419 | $ 367,419 | $ - | $ - |
| Texas Eastern | 800384 | 965 | 965 | - | | 100% | 0% | 0% | $ 64,987 | $ 64,987 | $ - | $ - |
| TransCanada | 33322 | 34,000 | | 34,000 | | 0% | 100% | 0% | $ 10,995,763 | $ - | $ 10,995,763 | $ - |
| TransCanada | 29594 | 5,937 | 5,937 | - | | 100% | 0% | 0% | $ 956,387 | $ 956,387 | $ - | $ - |
| Union | M12205 | 6,003 | 6,003 | - | | 100% | 0% | 0% | $ 156,743 | $ 156,743 | $ - | $ - |
| Vector | CRL-NUI-0725 | 17,172 | | 17,172 | | 0% | 100% | 0% | $ 1,566,952 | $ - | $ 1,566,952 | $ - |
| Vector | CRL-NUI-0727 | 17,086 | | 17,086 | | 0% | 100% | 0% | $ 389,774 | $ - | $ 389,774 | $ - |
| Vector | FT-1-NUI-0122 | 6,070 | 6,070 | - | | 100% | 0% | 0% | $ 566,295 | $ 566,295 | $ - | $ - |
| Vector | FT-1-NUI-C0122 | 6,070 | 6,070 | - | | 100% | 0% | 0% | $ 28,138 | $ 28,138 | $ - | $ - |
| Annual Total Demand Costs | | | | | | | | | $ 33,535,953 | $ 9,154,859 | $ 23,128,453 | $ 1,252,642 |

Northern Utilities, Inc.

Storage Contract Demand Cost Estimates

November 1, 2015 through October 31, 2016

| Vendor | Contract ID | Rate | Negotiated | MSQ | Space Charge Billing Determinant | MDWQ | Space Rate | Demand Rate | Months Per Year | Support for Demand Rates | Annual Space Charge | Annual Demand Charge | Annual Fixed Charges |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tennessee | 5195 | FS-MA | No | 259,337 | 259,337 | 4,243 | $ 0.0205 | $ 1.4938 | 12 | Line 1 of Page 3, Att to Sch 5A | $ 63,797 | $ 76,058 | $ 139,855 |
| W-10 | 01052 | Storage | Yes | 3,400,000 | | 34,000 | | | 12 | Line 3 of Page 3, Att to Sch 5A | $ - | $ - | $ 2,890,000 |

Total Annual Fixed Charges $ 3,029,855

MSQ = Maximum Space Quantity
MDWQ = Maximum Daily Withdrawal Quantity

# REDACTED



Northern Utilities, Inc.

Peaking Contract Demand Cost Estimates

November 1, 2015 through October 31, 2016

Denotes Confidential Information

| Resource | Supplier | Contract Quantity | Maximum Daily Quantity | Months Per Year | Monthly Fixed Charges | Annual Fixed Charges |
|---|---|---|---|---|---|---|
| LNG Contract | [redacted] | 125,000 | 3,000 | 5 | [redacted] | |
| Peaking Contract 1 | | 150,000 | 10,000 | 5 | | |
| Peaking Contract 2 | | 225,000 | 15,000 | 5 | | |
| Peaking Contract 3 | | 100,000 | 5,000 | 5 | | |
| Peaking Contract 4 | | 240,000 | 12,000 | 5 | | |
| Total Peaking Supply Contract Demand Costs | | | | | | $ 4,223,000 |

# REDACTED



Northern Utilities, Inc.

Asset Management and Capacity Release Revenue Projections

November 1, 2015 through October 31, 2016

| Denotes Confidential Information | |
|---|---|
| Asset Management Agreeement Revenue | |
| Resources | Projected Revenue |
| Chicago via Vector, TCPL, Iroquois, TGP, Algonquin<br>Wash 10 via Vector, TCPL, PNGTS<br>AGT K#93201A1C<br>Tennessee Niagara<br>Tennessee Long-Haul | [redacted] |
| Total Asset Management | $ (9,565,000) |

| Capacity Release Revenue | |
|---|---|
| Resources | Projected Revenue |
| Texas Eastern Contract 800384 | $ (64,987) |
| Total Capacity Release | $ (64,987) |

| | |
|---|---|
| Total Asset Management and Capacity Release Revenue | $ (9,629,987) |

# REDACTED

Northern Utilities, Inc.
Natural Gas Commodity Price Forecast
**Based upon NYMEX Settlement for September 4, 2015**

Denotes Confidential Information

Estimated Adders to NYMEX Last Day Settlement

| Line | | Supply Source | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CHICAGO | Chicago | [redacted] | | | | | | | | | | | |
| 2 | IROQ REC | Iroquois Receipts | | | | | | | | | | | | |
| 3 | PNGTSDEL | PNGTS Delivered | | | | | | | | | | | | |
| 4 | PNGTSDEL-2 | PNGTS Delivered (Dec-Feb) | | | | | | | | | | | | |
| 5 | PNGTS | PNGTS Receipts | | | | | | | | | | | | |
| 6 | LEWISTON | Maritimes Delivered | | | | | | | | | | | | |
| 7 | NIAGARA | Niagara | | | | | | | | | | | | |
| 8 | TGP Z0 | Tennessee Production (Zone 0) | | | | | | | | | | | | |
| 9 | TGP Z1 | Tennessee Production (Zone L) | | | | | | | | | | | | |
| 10 | Z4200LEG | Tennessee Production (Zone 4) | | | | | | | | | | | | |
| 11 | TENNZ4SPOT | Tenessee Zone 4 Spot | | | | | | | | | | | | |
| 12 | PEAK 1 | Peaking Contract 1 | | | | | | | | | | | | |
| 13 | PEAK 2 | Peaking Contract 2 | | | | | | | | | | | | |
| 14 | PEAK 3 | Peaking Contract 3 | | | | | | | | | | | | |
| 15 | DISTRIGAS | LNG | | | | | | | | | | | | |
| 16 | W10 Supply | W10 Supply (Injection) | | | | | | | | | | | | |
| 17 | TGPINJ | TGP FS Supply (Injection) | | | | | | | | | | | | |
| 18 | W10 Chicago | W10 AMA Spot Tier I | | | | | | | | | | | | |
| 19 | DAWN | W10 AMA Spot Tier II | | | | | | | | | | | | |
| 20 | PNGTSSPOT | W10 AMA Additional Spot | | | | | | | | | | | | |
| 21 | AGTREC | AGT Receipts | | | | | | | | | | | | |
| 22 | TGP Z6 | Spot Supplies | | | | | | | | | | | | |
| 23 | PEAK 4 | Peaking Contract 4 (Fixed Price) | | | | | | | | | | | | |
| 24 | NYMEX NG | NYMEX Forecast | $2.74 | $2.90 | $3.01 | $3.01 | $2.98 | $2.84 | $2.84 | $2.88 | $2.91 | $2.92 | $2.92 | $2.95 |

Northern Utilities, Inc.
Transportation Contract Rates
November 2015 through October 2016
Fixed Demand Rates

| Line | Pipeline | Rate Schedule | Receipt | Delivery | Notes | Demand Rate Support | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Algonquin | AFT-1 (AFT-2) | N/A | N/A | | Page 5 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 | $ 6.1138 |
| 2 | Algonquin | AFT-1 (F-2/F-3) | N/A | N/A | | Page 5 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 | $ 6.5734 |
| 3 | Granite | FT-NN | N/A | N/A | | Page 7, 8 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.1069 | $ 4.2845 | $ 4.2845 | $ 4.2845 |
| 4 | Iroquois | RTS-1 | Zone 1 | Zone 1 | | Page 9 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 | $ 6.5971 |
| 5 | PNGTS | FT | N/A | N/A | | Page 17 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 | $ 25.9843 |
| 6 | PNGTS | FT (Seasonal) | N/A | N/A | | Page 17 | $ 49.3701 | $ 49.3701 | $ 49.3701 | $ 49.3701 | $ 49.3701 | | | | | | | |
| 7 | Tennessee | FT-A | Zone 0 | Zone 6 | | Page 19 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 | $ 23.2362 |
| 8 | Tennessee | FT-A | Zone L | Zone 6 | | Page 19 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 | $ 20.6281 |
| 9 | Tennessee | FT-A | Zone 4 | Zone 6 | | Page 19 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 | $ 8.1668 |
| 10 | Tennessee | FT-A | Zone 5 | Zone 6 | | Page 19 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 | $ 7.1756 |
| 11 | Texas Eastern | FT-1/FTS | M3 | M3 | 1 | Pages 23, 24 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 | $ 5.6120 |
| 12 | TransCanada | FT | Dawn | E. Hereford | | Page 26 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 | $ 26.9504 |
| 13 | TransCanada | FT | Parkway | Iroquois | | Page 26 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 | $ 13.4241 |
| 14 | Union | M12 | Dawn | Parkway | | Page 26 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 | $ 2.1759 |
| 15 | Vector | FT-1 | Alliance | Dawn | | Page 39 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 | $ 7.6042 |
| 16 | Vector | FT-1 | W-10 Storage | Dawn | | Page 40 | $ 4.5625 | $ 4.5625 | $ 4.5625 | $ 4.5625 | $ 4.5625 | | | | | | | |
| 17 | Vector | FT-1 | Alliance | St. Clair | 2 | Pages 36, 37 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 | $ 7.7745 |
| 18 | Vector Canada | FT-1 | St. Clair | Dawn | | Page 26 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 | $ 0.3863 |

Variable Transportation Commodity Rates

| Line | Pipeline | Rate Schedule | Receipt | Delivery | Notes | Commodity Rate Support | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | Algonquin | AFT-1 (AFT-2) | N/A | N/A | 3 | Page 5, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 20 | Algonquin | AFT-1 (F-2/F-3) | N/A | N/A | 3 | Page 5, 46 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 |
| 21 | Granite | FT-NN | N/A | N/A | 3 | Page 7, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 22 | Iroquois | RTS-1 | Zone 1 | Zone 1 | 3 | Pages 9, 46 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 |
| 23 | LNG Trucking | | Everett, MA | LNG Plant | | Page 13 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 |
| 24 | PNGTS | FT | N/A | N/A | 3 | Page 17, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 25 | Tennessee | FT-A | Zone 0 | Zone 4 | 3, 4 | Page 19, 21, 46 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 | $ 0.3121 |
| 26 | Tennessee | FT-A | Zone 0 | Zone 6 | 3, 4 | Page 19, 21, 46 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 | $ 0.3643 |
| 27 | Tennessee | FT-A | Zone L | Zone 4 | 3, 4 | Page 19, 21, 46 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 | $ 0.2651 |
| 28 | Tennessee | FT-A | Zone L | Zone 6 | 3, 4 | Page 19, 21, 46 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 |
| 29 | Tennessee | FT-A | Zone 4 | Zone 6 | 3, 4 | Page 19, 21, 46 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 |
| 30 | Tennessee | FT-A | Zone 5 | Zone 6 | 3, 4 | Page 19, 21, 46 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 |
| 31 | TransCanada | FT | Dawn | E. Hereford | | Page 26 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 32 | TransCanada | FT | Parkway | Iroquois | | Page 26 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 33 | Union | M12 | Dawn | Parkway | | Page 35 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 34 | Vector | FT-1 | Alliance | W-10 | | Page 37, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 35 | Vector | FT-1 | Alliance | Dawn | | Page 37, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 36 | Vector | FT-1 | W-10 Storage | Dawn | | Page 37, 46 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |

Transportation Fuel Rates

| Line | Pipeline | Rate Schedule | Receipt | Delivery | Notes | Fuel Rate Support | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | Algonquin | AFT-1 (AFT-2) | N/A | N/A | | Page 6 | 1.07% | 0.97% | 0.97% | 0.97% | 0.97% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% |
| 38 | Algonquin | AFT-1 (F-2/F-3) | N/A | N/A | | Page 6 | 1.07% | 0.97% | 0.97% | 0.97% | 0.97% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% | 1.07% |
| 39 | Granite | FT-NN | N/A | N/A | | Page 7 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 40 | Iroquois | RTS-1 | Zone 1 | Zone 1 | 5 | Page 12 | 0.32% | 0.32% | 0.32% | 0.32% | 0.32% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 41 | PNGTS | FT | N/A | N/A | 5 | Page 18 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 42 | Tennessee | FT-A | Zone 0 | Zone 4 | | Page 21 | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% | 2.05% |
| 43 | Tennessee | FT-A | Zone 0 | Zone 6 | | Page 21 | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% | 2.68% |
| 44 | Tennessee | FT-A | Zone L | Zone 4 | | Page 21 | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% | 1.77% |
| 45 | Tennessee | FT-A | Zone L | Zone 6 | | Page 21 | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% |
| 46 | Tennessee | FT-A | Zone 4 | Zone 6 | | Page 21 | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% |
| 47 | Tennessee | FT-A | Zone 5 | Zone 6 | | Page 21 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% |
| 48 | TransCanada | FT | Dawn | E. Hereford | 5 | Page 38 | 2.06% | 2.06% | 2.06% | 2.06% | 2.06% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% | 1.50% |
| 49 | TransCanada | FT | Parkway | Iroquois | 5 | Page 38 | 1.04% | 1.04% | 1.04% | 1.04% | 1.04% | 0.71% | 0.71% | 0.71% | 0.71% | 0.71% | 0.71% | 0.71% |
| 50 | Union | M12 | Dawn | Parkway | | Page 35 | 1.01% | 1.01% | 1.01% | 1.01% | 1.01% | 0.56% | 0.56% | 0.56% | 0.56% | 0.56% | 0.56% | 0.56% |
| 51 | Vector | FT-1 | Alliance | W-10 | 5 | Page 42 | 0.79% | 0.79% | 0.79% | 0.79% | 0.79% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% |
| 52 | Vector | FT-1 | Alliance | Dawn | 5 | Page 42 | 0.79% | 0.79% | 0.79% | 0.79% | 0.79% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% | 1.28% |
| 53 | Vector | FT-1 | W-10 Storage | Dawn | 5 | Page 42 | 0.29% | 0.29% | 0.29% | 0.29% | 0.29% | 0.52% | 0.52% | 0.52% | 0.52% | 0.52% | 0.52% | 0.52% |

Note 1 FT-1 Demand Rate = $4.952 plus FT-1 / FTS Rate = $0.66, totals to $5.612
Note 2 Negotiated Rate Agreement = $8.0908 per Dth (Page 36), which is higher than Maximum Reservation Rate (Page 37), so Maximum Reservation Rate prevails.
Note 3 Variable Rate includes ACA Charge on Page 46.
Note 4 Tennessee Variable Transportation Commodity Rates are calculated by adding the Maximum Commodity Rates found on Page 20 to the applicable EPCR found on page 21.
Note 5 Fuel Rates Estimated based on 12 months historic data.

| Northern Utilities, Inc.<br>Underground Storage Contract Rates<br>November 2015 through October 2016 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Line | Storage | Rate Schedule | Notes | Reference | Space Rate | Demand Rate | Withdrawal Rate | Withdrawal Fuel Loss | Injection Rate | Injection Fuel Loss |
| 1 | Tennessee | FS-MA | | Page 20, 22 | $ 0.0207 | $ 1.4938 | $ 0.0087 | 0.00% | $ 0.0087 | 0.80% |
| 2 | Texas Eastern | SS-1 | | Page 24 | $ 0.1293 | $ 5.3400 | | | | |
| 3 | W-10 | Storage | 1 | Pages 43, 44, 45 | | | $ - | 0.30% | $ - | 0.70% |

Note 1 The demand charge for W-10 Storage shall be $240,833.34 per month.

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# ALGONQUIN GAS TRANSMISSION, LLC

## SUMMARY OF RATES

## Currently Effective Rates 12/01/2014

### RATE SCHEDULE AFT-1

| | | Commodity | | Authorized Overrun | | Capacity Release |
|---|---|---|---|---|---|---|
| | Reservation | Max | Min | Max | Min | Vol Res |
| (F-1/WS-1) | $ 6.5734 | $0.0112 | $0.0112 | $0.2273 | $0.0112 | $0.2161 |
| (F-2/F-3) | $ 6.5734 | $0.0112 | $0.0112 | $0.2273 | $0.0112 | $0.2161 |
| (F-4) | $ 6.5734 | $0.0112 | $0.0112 | $0.2273 | $0.0112 | $0.2161 |
| (STB/SS-3) | $ 6.5734 | $0.0112 | $0.0112 | $0.2273 | $0.0112 | $0.2161 |
| (FTP) | $11.8368 | $0.0000 | $0.0000 | $0.3892 | $0.0000 | $0.3892 |
| (PSS-T) | $ 9.7854 | $0.0000 | $0.0000 | $0.3217 | $0.0000 | $0.3217 |
| (AFT-2) | $ 6.1138 | $0.0000 | $0.0000 | $0.2010 | $0.0000 | $0.2010 |
| (AFT-3) | $10.7554 | $0.0000 | $0.0000 | $0.3536 | $0.0000 | $0.3536 |
| (AFT-5) | $12.6265 | $0.0000 | $0.0000 | $0.4151 | $0.0000 | $0.4151 |
| (ITP) | $13.0110 | $0.0000 | $0.0000 | $0.4278 | $0.0000 | $0.4278 |
| (X-35) | $10.2027 | $0.0000 | $0.0000 | $0.3354 | $0.0000 | $0.3354 |
| (X-39) | $13.2089 | $0.0000 | $0.0000 | $0.4343 | $0.0000 | $0.4343 |
| Incremental | Surcharges | | | | | |
| Hubline | $ 1.8607 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0612 |
| Secondary 1/ | | $0.0612 | $0.0000 | | | |
| Tiverton | $ 1.6424 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0540 |
| Ramapo | $ 7.5608 | $0.0000 | $0.0000 | $0.2486 | $0.0000 | $0.2486 |

### RATE SCHEDULE AFT-1S

| | | Commodity | | Authorized Overrun | | Capacity Release |
|---|---|---|---|---|---|---|
| | Reservation | Max | Min | Max | Min | Vol Res |
| (F-1/WS-1) | $ 2.6294 | $0.2273 | $0.0000 | $0.2273 | $0.0000 | $0.0864 |
| (F-2/F-3) | $ 2.6294 | $0.2273 | $0.0000 | $0.2273 | $0.0000 | $0.0864 |
| (F-4) | $ 2.6294 | $0.2273 | $0.0000 | $0.2273 | $0.0000 | $0.0864 |
| (STB/SS-3) | $ 2.6294 | $0.2273 | $0.0000 | $0.2273 | $0.0000 | $0.0864 |
| (Hubline) 2/ | | $0.0612 | $0.0000 | | | |

### OTHER FIRM RATE SCHEDULES

| | | Commodity | | Authorized Overrun | | Capacity Release |
|---|---|---|---|---|---|---|
| | Reservation | Max | Min | Max | Min | Vol Res |
| AFT-E | $ 6.5734 | $0.0112 | $0.0112 | $0.2273 | $0.0112 | $0.2161 |
| (Hubline) 2/ | | $0.0612 | $0.0000 | | | |
| AFT-ES | $ 2.6294 | $0.2273 | $0.0112 | $0.2273 | $0.0112 | $0.0864 |
| (Hubline) 2/ | | $0.0612 | $0.0000 | | | |
| T-1 | $ 1.6480 | $0.0039 | | $0.0581 | | |
| AFT-4 | $ 3.5211 | $0.0013 | | $0.1171 | | |
| AFT-CL: | | | | | | |
| Canal | $ 2.0858 | $0.0000 | $0.0000 | $0.0686 | $0.0000 | $0.0686 |
| Middletown | $ 3.2764 | $0.0000 | $0.0000 | $0.1077 | $0.0000 | $0.1077 |
| Cleary | $ 1.4529 | $0.0000 | $0.0000 | $0.0478 | $0.0000 | $0.0478 |
| Lake Road | $ 0.6476 | $0.0000 | $0.0000 | $0.0213 | $0.0000 | $0.0213 |
| Brayton Pt. | $ 1.2700 | $0.0000 | $0.0000 | $0.0418 | $0.0000 | $0.0418 |
| Manchester | $ 2.4500 | $0.0000 | $0.0000 | $0.0805 | $0.0000 | $0.0805 |
| Bellingham | $ 0.9714 | $0.0000 | $0.0000 | $0.0319 | $0.0000 | $0.0319 |
| Phelps Dodge | $ 0.0000 | $0.0166 | $0.0000 | $0.0166 | $0.0000 | $0.0000 |
| Cape Cod | $ 9.0501 | $0.0000 | $0.0000 | $0.2975 | $0.0000 | $0.2975 |
| Northeast Gateway | $ 4.3449 | $0.0000 | $0.0000 | $0.1428 | $0.0000 | $0.1428 |
| J-2 Facility | $ 4.6346 | $0.0000 | $0.0000 | $0.1524 | $0.0000 | $0.1524 |
| Kleen Energy | $ 1.2247 | $0.0000 | $0.0000 | $0.0403 | $0.0000 | $0.0403 |
| X-33 | $ 3.0873 | $0.0395 | | $0.1410 | | |

## INTERRUPTIBLE SERVICE

| | Commodity | | Authorized Overrun | |
|---|---|---|---|---|
| | Max | Min | Max | Min |
| AIT-1 | $0.2421 | $0.0076 | $0.2421 | $0.0076 |
| (Hubline 2/) | $0.0612 | $0.0000 | | |
| AIT-2 | | | | |
| Brayton Pt. | $0.0418 | $0.0000 | $0.0418 | $0.0000 |
| Manchester | $0.0805 | $0.0000 | $0.0805 | $0.0000 |
| Canal | $0.0686 | $0.0000 | $0.0686 | $0.0000 |
| Cape Cod | $0.2975 | $0.0000 | $0.2975 | $0.0000 |
| Northeast Gateway | $0.1428 | $0.0000 | $0.1428 | $0.0000 |
| J-2 Facility | $0.1524 | $0.0000 | $0.1524 | $0.0000 |
| Kleen Energy | $0.0403 | $0.0000 | $0.0403 | $0.0000 |
| PAL | $0.2421 | $0.0000 | $0.0000 | $0.0000 |

---

## TITLE TRANSFER TRACKING SERVICE

| | Max | Min |
|---|---|---|
| TTT | $5.3900 | $0.0000 |

---

**Rates are per MMBTU. Rate excludes the Annual Charge Adjustment (ACA) Surcharge. The ACA Commodity Surcharge to applicable customers, pursuant to Section 34 of the General Terms and Conditions.**

---

## FUEL REIMBURSEMENT PERCENTAGES

| Period | Duration | FRP |
|---|---|---|
| System Services 1/ | | |
| Winter | Dec 1 - Mar 31 | 0.97% |
| Spring, Summer and Fall | Apr 1 - Nov 30 | 1.07% |
| Incremental Ramapo Service 1/ | | |
| Winter | Dec 1 - Mar 31 | 2.38% |
| Spring, Summer and Fall | Apr 1 - Nov 30 | 1.99% |

1/ For all receipt points other than Beverly, Meter No. 00215

| | | |
|---|---|---|
| System Services - Beverly Receipts/Non-Hubline Deliveries | | |
| Winter | Dec 1 - Mar 31 | 0.69% |
| Spring, Summer and Fall | Apr 1 - Nov 30 | 0.73% |
| Incremental Ramapo Service - Beverly Receipts/Non-Hubline Deliveries | | |
| Winter | Dec 1 - Mar 31 | 1.81% |
| Spring, Summer and Fall | Apr 1 - Nov 30 | 1.73% |

---

**2/ Hubline Surcharge applicable to all customers utilizing secondary receipt points between and including Beverly and Weymouth and/or utilizing secondary delivery points between Beverly and Weymouth,including Beverly and excluding Weymouth,and in addition to other applicable charges.**

---

**The Summary of Rates serves as a handy reference and does not replace Algonquin's Tariff. The rates are subject to commission approval.**

4.2 Rate Schedule FT-NN
Firm Transportation Service
Currently Effective Rates

| | $/Dth | |
|---|---|---|
| | Base Tariff Rate | ACA Adj. |
| Reservation Charge: | | |
| Maximum | $~~3.8633~~4.1069 | N/A |
| Minimum | $0.0000 | N/A |
| Commodity Charge: | | |
| Maximum | $0.0000 | a/ |
| Minimum | $0.0000 | a/ |
| Authorized Overrun Commodity Charge: | | |
| Maximum | $0.~~1270~~1350 | a/ |
| Minimum | $0.0000 | a/ |
| Fuel and Losses Percentage | 0.35% | N/A |
| Volumetric Reservation Charge | | |
| Maximum | $0.~~1270~~1350 | a/ |
| Minimum | $0.0000 | a/ |

a/ The ACA Adj. Surcharge is revised annually and posted on the FERC website at the web address http://www.ferc.gov on the Annual Charges page of the Natural Gas Section. The ACA Adj. Surcharge is incorporated by reference in the Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Section 6.17 of the General Terms and Conditions.

SCHEDULE 3

Granite State Gas Transmission
Docket No. RP10-896-XXX
Second Amended Settlement
Limited Section 4 Filing
20XX Filing Year

FOR ILLUSTRATIVE PURPOSES

| | | PROJECTED LTM 3/31/16 | PROJECTED LTM 3/31/17 | |
|---|---|---|---|---|
| 1 | Total Capital Costs | $ 285,077 | $ 412,373 | Schedule 1, Line 8 |
| 2 | FT-NN & FT-1 Adjustment | $ 0.1776 | $ 0.2568 | Line 1 / Line 8 |
| 3 | Reservation Charge | $ 4.1069 | $ 4.2845 | |
| 4 | TOTAL FT-NN & FT-1 Reservation Char | **$ 4.2845** | **$ 4.5413** | Line 2 + Line 3 |
| 5 | IT-1 Adjustment | $ 0.0058 | $ 0.0084 | Line 2 * 12 / 365 |
| 6 | Commodity Charge | $ 0.1350 | $ 0.1408 | |
| 7 | TOTAL IT-1 Commodity Charge | **$ 0.1408** | **$ 0.1493** | Line 5 + Line 6 |
| 8 | Billing Determinants | 1,605,600 | 1,605,600 | APPENDIX C, Schedule 3 |

Iroquois Gas Transmission System, L.P.
FERC Gas Tariff
Second Revised Volume No. 1

First Revised Sheet No. 4

-------------- RATES (All in $ Per Dth) ---------------

| | Minimum | Non-Settlement Recourse & Eastchester Initial Rates 3/ | Settlement Recourse Rates – Applicable to Non-Eastchester/Non-Contesting Shippers 2/: Effective 1/1/2003 | Effective 7/1/2004 | Effective 1/1/2005 | Effective 1/1/2006 | Effective 1/1/2007 |
|---|---|---|---|---|---|---|---|
| RTS DEMAND: | | | | | | | |
| Zone 1 | $0.0000 | $7.5637 | $7.5637 | $6.9586 | $6.8514 | $6.7788 | $\boxed{\$6.5971}$ |
| Zone 2 | $0.0000 | $6.4976 | $6.4976 | $5.9778 | $5.8857 | $5.8233 | $5.6673 |
| Inter-Zone | $0.0000 | $12.7150 | $12.7150 | $11.6978 | $11.5177 | $11.3956 | $11.0902 |
| Zone 1 (MFV) 1/ | $0.0000 | $5.3607 | $5.3607 | $4.9318 | $4.8559 | $4.8044 | $4.6757 |
| RTS COMMODITY: | | | | | | | |
| Zone 1 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $\boxed{\$0.0030}$ |
| Zone 2 | $0.0024 | $0.0024 | $0.0024 | $0.0024 | $0.0024 | $0.0024 | $0.0024 |
| Inter-Zone | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 |
| Zone 1 (MFV) 1/ | $0.0300 | $0.1506 | $0.1506 | $0.1386 | $0.1364 | $0.1350 | $0.1314 |
| ITS COMMODITY: | | | | | | | |
| Zone 1 | $0.0030 | $0.2517 | $0.2517 | $0.2318 | $0.2283 | $0.2259 | $0.2199 |
| Zone 2 | $0.0024 | $0.2160 | $0.2160 | $0.1989 | $0.1959 | $0.1938 | $0.1887 |
| Inter-Zone | $0.0054 | $0.4234 | $0.4234 | $0.3900 | $0.3840 | $0.3800 | $0.3700 |
| Zone 1 (MFV) 1/ | $0.0300 | $0.3268 | $0.3268 | $0.3007 | $0.2960 | $0.2929 | $0.2850 |
| MAXIMUM VOLUMETRIC CAPACITY RELEASE RATE 4/: | | | | | | | |
| Zone 1 | $0.0000 | $0.2487 | $0.2487 | $0.2288 | $0.2253 | $0.2229 | $0.2169 |
| Zone 2 | $0.0000 | $0.2136 | $0.2136 | $0.1965 | $0.1935 | $0.1915 | $0.1863 |
| Inter-Zone | $0.0000 | $0.4180 | $0.4180 | $0.3846 | $0.3787 | $0.3746 | $0.3646 |
| Zone 1 (MFV) 1/ | $0.0000 | $0.1762 | $0.1762 | $0.1621 | $0.1596 | $0.1580 | $0.1537 |

**SEE SHEET NO. 4A FOR ADJUSTMENTS TO RATES WHICH MAY BE APPLICABLE

(Footnotes continued on Sheet 4.01)

1/ As authorized pursuant to order of the Federal Energy Regulatory Commission, Docket Nos. RS92-17-003, et al., dated June 18, 1993 (63 FERC para. 61,285).

2/ Settlement Recourse Rates were established in Iroquois' Settlement dated August 29, 2003, which was approved by Commission order issued Oct. 24, 2003, in Docket No. RP03-589-000. That Settlement also established a moratorium on changes to the Settlement Rates until January 1, 2008, defines the Non-Eastchester/Non-Contesting parties to which it applies, and provides that Iroquois' TCRA will be terminated on July 1, 2004.

3/ See Sections 1.2 and 4.3 of the Settlement referenced in footnote 2. As directed by the Commission's January 30, 2004 Order in Docket No. RP04-136, the Eastchester Initial Rates apply for service to Eastchester Shippers prior to the July 1, 2004 effective date of the rates set forth on Sheet No. 4C.

4/ No rate cap shall apply to any capacity releases with terms of less than or equal to one year pursuant to FERC Order Nos. 712 et al.

To the extent applicable, the following adjustments apply:

ACA ADJUSTMENT:
Commodity 1/

MEASUREMENT VARIANCE/FUEL USE FACTOR:

| | |
|---|---|
| Minimum | 0.00% |
| Maximum (Non-Eastchester Shipper) | 1.00% |
| Maximum (Eastchester Shipper) | 4.50% |
| Maximum (Brookfield Shipper) | 1.20% |

1/ The ACA ADJUSTMENT Commoditiy rate shall be the applicable FERC ACA unit charge incorporated by reference pursuant to Section 12.2 in the General Terms and Conditions of Transporter's FERC Gas Tariff.

Historic Fuel Retention Ratios

| Pipeline | Receipt | Delivery | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Winter | Summer | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iroquois | Zone 1 | Zone 1 | 0.00% | 0.00% | 0.30% | 0.40% | 0.00% | 0.00% | 0.00% | 0.10% | 0.30% | 0.40% | 0.40% | 0.40% | 0.32% | 0.10% | 0.19% |

# REDACTED

| Line | Item | Value | Reference |
|---|---|---|---|
| 1 | LNG Trucking Rate | [redacted] | Page 14 |
| 2 | Diesel Adjustment | | |
| 3 | Current Diesel Rate per Gallon | | Page 16 |
| 4 | Forecast Diesel Rate per Gallon | | Estimate |
| 5 | Diesel Fuel Adjustment per Dth | | Page 15 |
| 6 | | | |
| 7 | Average LNG Trucking Cost | $ 1.19 | Line 1 plus Line 7 |

# REDACTED

## LNG TRANSPORTATION RATE AGREEMENT

**DATE:** October 14, 2013

**CONFIDENTIAL**

**CARRIER:**

[redacted]

CONFIDENTIAL INFORMATION

**SHIPPER:**

Northern Utilities Inc.
d/b/a Unitil Services Corp.
6 Liberty Lane West
Hampton, NH 03842

**EFFECTIVE DATE:** 11/01/14

**EXPIRATION DATE:** 10/31/15

| ORIGIN | DESTINATION | COMMODITY DATE | RATE |
|---|---|---|---|
| Everett, MA | Lewiston, ME | 11/01/14 to 10/31/15 | [redacted] |

**OTHER TERMS AND CONDITIONS:**

CONFIDENTIAL INFORMATION

[redacted]

**CARRIER:** Transgas Inc.

CONFIDENTIAL INFORMATION

[redacted]

**SHIPPER:** **Northern Utilities Inc.**

**By:** ______________________

**Robert Furino**

**Its:** **Director of Energy Contracts**

K:\Unitil 2014-15\Northern Utilities-LNG Trnsptn Rate Agrmnt 14-15

REDACTED



[redacted]

CONFIDENTIAL INFORMATION

| If the Price is: (See Note 1) | | The Weekly Fuel Surcharge Will Be: | [redacted]e is: (See Note 1) | | The Weekly Fuel Surcharge Will Be: |
|---|---|---|---|---|---|
| At Least: ($/gallon) | But Less Than: ($/gallon) | | At Least: ($/gallon) | But Less Than: ($/gallon) | |
| [redacted] | | | | | |

CONFIDENTIAL INFORMATION

## Wells, Francis

**From:** EIA_eLists@eia.gov
**Sent:** Monday, July 13, 2015 3:15 PM
**To:** weekdfprice@mailer.eia.gov
**Subject:** Today's Diesel Prices

```
****** ******   **    ***********************************
**     **     * *    ***      United States      ***
****    **    ******   * Energy Information Administration *
**     **    **   **   ***********************************
****** ****** **    **  ***********************************
```

On-Highway Diesel Prices, by Week and PADD (Self Service Cash Price in Dollars per Gallon, Including Taxes)

| Date | 6/29/2015 | 7/6/2015 | 7/13/2015 |
|---|---|---|---|
| U.S. | 2.843 | 2.832 | 2.814 |
| PADD 1 - East Coast | 2.954 | 2.938 | 2.915 |
| PADD 1a - New England | 3.071 | 3.060 | 3.029 |
| PADD 1b - Central Atlantic | 3.094 | 3.073 | 3.038 |
| PADD 1c - Lower Atlantic | 2.823 | 2.810 | 2.797 |
| PADD 2 - Midwest | 2.731 | 2.724 | 2.704 |
| PADD 3 - Gulf Coast | 2.730 | 2.712 | 2.708 |
| PADD 4 - Rocky Mountain | 2.776 | 2.785 | 2.787 |
| PADD 5 - West Coast | 3.068 | 3.069 | 3.037 |
| PADD 5b - West Coast less CA | 2.978 | 2.978 | 2.919 |
| California | 3.141 | 3.142 | 3.133 |

http://www.eia.gov/petroleum/gasdiesel/
---------------------------------------------------

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Statement of Transportation Rates
(Rates per DTH)

| Rate Schedule | Rate Component | Base Rate | ACA Unit Charge 1/ | Current Rate |
|---|---|---|---|---|
| FT | Recourse Reservation Rate | | | |
| | -- Maximum | $\boxed{\$25.9843}$ | --------- | $25.9843 |
| | -- Minimum | $00.0000 | --------- | $00.0000 |
| | Seasonal Recourse Reservation Rate | | | |
| | -- Maximum | $\boxed{\$49.3701}$ | --------- | $49.3701 |
| | -- Minimum | $00.0000 | --------- | $00.0000 |
| | Recourse Usage Rate | | | |
| | -- Maximum | $\boxed{\$00.0000}$ | $00.0019 | $00.0019 |
| | -- Minimum | $00.0000 | $00.0019 | $00.0019 |
| FT-FLEX | Recourse Reservation Rate | | | |
| | --Maximum | $17.4406 | --------- | $17.4406 |
| | --Minimum | $00.0000 | --------- | $00.0000 |
| | Recourse Usage Rate | | | |
| | --Maximum | $00.2809 | $00.0019 | $00.2828 |
| | --Minimum | $00.0000 | $00.0019 | $00.0019 |

The following adjustment applies to all Rate Schedules above:

MEASUREMENT VARIANCE:

| | |
|---|---|
| Minimum | down to -1.00% |
| Maximum | up to +1.00% |

---

1/ ACA assessed where applicable under Section 154.402 of the Commission's regulations and will be charged pursuant to Section 6.18 of the General Terms and Conditions at such time that initial and successive ACA assessments are made.

Historic Fuel Retention Ratios

| Pipeline | Receipt | Delivery | Jun-13 | Jul-13 | Aug-13 | Sep-13 | Oct-13 | Nov-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Winter | Summer | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PNGTS | N/A | N/A | -0.50% | -0.50% | -0.30% | 0.00% | 0.00% | -0.20% | -0.20% | -0.40% | -0.50% | -0.50% | -0.60% | -0.60% | -0.36% | -0.36% | -0.36% |

**Tennessee Gas Pipeline Company, L.L.C.**
**Settlement Rates effective November 1, 2015 - Base Reservation and Commodity**
3 % Rate Reduction from the Appendix A-0 Rates

**General System Transportation Services**

**Rate Schedule FT-A, FT-G, NET, NET-284**

| Line No. | Reservation | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Zone 0 | $5.5411 | | $11.5794 | $15.5758 | $15.8514 | $17.4175 | $18.4879 | $23.1959 |
| 2 | Zone L | | $4.9193 | | | | | | |
| 3 | Zone 1 | $8.3417 | | $7.9962 | $10.6413 | $15.0745 | $14.8460 | $16.7429 | $20.5878 |
| 4 | Zone 2 | $15.5759 | | $10.5774 | $5.5014 | $5.1427 | $6.5803 | $9.0504 | $11.6830 |
| 5 | Zone 3 | $15.8514 | | $8.3784 | $5.5458 | $4.0009 | $6.1457 | $11.1149 | $12.8437 |
| 6 | Zone 4 | $20.1259 | | $18.5544 | $7.0708 | $10.7456 | $5.2598 | $5.6884 | $8.1265 |
| 7 | Zone 5 | $23.9973 | | $16.8625 | $7.4172 | $8.9748 | $5.8432 | $5.4810 | $7.1353 |
| 8 | Zone 6 | $27.7603 | | $19.3678 | $13.3296 | $14.6845 | $10.3726 | $5.4568 | $4.7237 |

| Line No. | Commodity | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Zone 0 | $0.0032 | | $0.0115 | $0.0177 | $0.0219 | $0.2668 | $0.2546 | $0.3030 |
| 10 | Zone L | | $0.0012 | | | | | | |
| 11 | Zone 1 | $0.0042 | | $0.0081 | $0.0147 | $0.0179 | $0.2269 | $0.2313 | $0.2641 |
| 12 | Zone 2 | $0.0167 | | $0.0087 | $0.0012 | $0.0028 | $0.0734 | $0.1178 | $0.1305 |
| 13 | Zone 3 | $0.0207 | | $0.0169 | $0.0026 | $0.0002 | $0.0982 | $0.1358 | $0.1482 |
| 14 | Zone 4 | $0.0250 | | $0.0205 | $0.0087 | $0.0105 | $0.0454 | $0.0642 | $0.1041 |
| 15 | Zone 5 | $0.0284 | | $0.0256 | $0.0100 | $0.0118 | $0.0639 | $0.0633 | $0.0787 |
| 16 | Zone 6 | $0.0346 | | $0.0300 | $0.0143 | $0.0163 | $0.0984 | $0.0533 | $0.0324 |

| Line No. | Min. Commodity | Delivery Zone | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
| 17 | Zone 0 | $0.0032 | | $0.0115 | $0.0177 | $0.0219 | $0.0250 | $0.0284 | $0.0346 |
| 18 | Zone L | | $0.0012 | | | | | | |
| 19 | Zone 1 | $0.0042 | | $0.0081 | $0.0147 | $0.0179 | $0.0210 | $0.0256 | $0.0300 |
| 20 | Zone 2 | $0.0167 | | $0.0087 | $0.0012 | $0.0028 | $0.0056 | $0.0100 | $0.0143 |
| 21 | Zone 3 | $0.0207 | | $0.0169 | $0.0026 | $0.0002 | $0.0081 | $0.0118 | $0.0163 |
| 22 | Zone 4 | $0.0250 | | $0.0205 | $0.0087 | $0.0105 | $0.0028 | $0.0046 | $0.0092 |
| 23 | Zone 5 | $0.0284 | | $0.0256 | $0.0100 | $0.0118 | $0.0046 | $0.0046 | $0.0066 |
| 24 | Zone 6 | $0.0346 | | $0.0300 | $0.0143 | $0.0163 | $0.0086 | $0.0041 | $0.0020 |

**Rate Schedule FT-GS**

| Line No. | | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 25 | Zone 0 | $0.3067 | | $0.6456 | $0.8707 | $0.8898 | $1.2212 | $1.2676 | $1.5740 |
| 26 | Zone L | | $0.2707 | | | | | | |
| 27 | Zone 1 | $0.4611 | | $0.4460 | $0.5973 | $0.8434 | $1.0403 | $1.1488 | $1.3922 |
| 28 | Zone 2 | $0.8697 | | $0.5880 | $0.3026 | $0.2846 | $0.4340 | $0.6137 | $0.7706 |
| 29 | Zone 3 | $0.8886 | | $0.4755 | $0.3064 | $0.2194 | $0.4349 | $0.7449 | $0.8520 |
| 30 | Zone 4 | $1.1270 | | $1.0365 | $0.3960 | $0.5990 | $0.3336 | $0.3759 | $0.5494 |
| 31 | Zone 5 | $1.3425 | | $0.9489 | $0.4161 | $0.5032 | $0.3841 | $0.3638 | $0.4696 |
| 32 | Zone 6 | $1.5547 | | $1.0903 | $0.7443 | $0.8204 | $0.6668 | $0.3522 | $0.2912 |

**Rate Schedule IT, PTR and FT Overrun**

| Line No. | | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 33 | Zone 0 | $0.1854 | | $0.3919 | $0.5292 | $0.5424 | $0.8394 | $0.8624 | $1.0656 |
| 34 | Zone L | | $0.1630 | | | | | | |
| 35 | Zone 1 | $0.2783 | | $0.2707 | $0.3641 | $0.5129 | $0.7150 | $0.7818 | $0.9409 |
| 36 | Zone 2 | $0.5283 | | $0.3562 | $0.1821 | $0.1718 | $0.2897 | $0.4154 | $0.5146 |
| 37 | Zone 3 | $0.5413 | | $0.2919 | $0.1849 | $0.1317 | $0.3002 | $0.5013 | $0.5705 |
| 38 | Zone 4 | $0.6859 | | $0.6299 | $0.2409 | $0.3635 | $0.2183 | $0.2512 | $0.3712 |
| 39 | Zone 5 | $0.8164 | | $0.5793 | $0.2535 | $0.3065 | $0.2561 | $0.2435 | $0.3133 |
| 40 | Zone 6 | $0.9462 | | $0.6658 | $0.4521 | $0.4986 | $0.4393 | $0.2326 | $0.1877 |

**Tennessee Gas Pipeline Company, L.L.C.**
**Settlement Rates effective November 1, 2015 - Base Reservation and Commodity**
3 % Rate Reduction from the Appendix A-0 Rates

**Rate Schedule FT-BH**

| Line No. | Reservation | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Zone 0 | $2.7705 | | | | | | | |
| 2 | Zone L | | $2.4596 | | | | | | |
| 3 | Zone 1 | $4.1708 | | $3.9980 | | | | | |
| 4 | Zone 2 | $7.7879 | | $5.2886 | $2.7506 | | | | |
| 5 | Zone 3 | $7.9257 | | $4.1892 | $2.7729 | $2.0004 | | | |
| 6 | Zone 4 | $10.0630 | | $9.2772 | $3.5354 | $5.3728 | $2.6299 | | |
| 7 | Zone 5 | $11.9986 | | $8.4312 | $3.7086 | $4.4874 | $2.9215 | $2.7405 | |
| 8 | Zone 6 | $13.8801 | | $9.6839 | $6.6649 | $7.3422 | $5.1863 | $2.7284 | $2.3619 |

| Line No. | Commodity | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Zone 0 | $0.0487 | | | | | | | |
| 10 | Zone L | | $0.0416 | | | | | | |
| 11 | Zone 1 | $0.0727 | | $0.0736 | | | | | |
| 12 | Zone 2 | $0.1442 | | $0.0954 | $0.0464 | | | | |
| 13 | Zone 3 | $0.1504 | | $0.0853 | $0.0481 | $0.0331 | | | |
| 14 | Zone 4 | $0.1897 | | $0.1724 | $0.0665 | $0.0985 | $0.0887 | | |
| 15 | Zone 5 | $0.2248 | | $0.1634 | $0.0706 | $0.0852 | $0.1119 | $0.1084 | |
| 16 | Zone 6 | $0.2618 | | $0.1883 | $0.1234 | $0.1366 | $0.1836 | $0.0981 | $0.0712 |

**Rate Schedule FT-A EDS/ERS (Extended Delivery/Receipt)**

| Line No. | Reservation | Zone 0 | Zone L | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
|---|---|---|---|---|---|---|---|---|---|
| 17 | Zone 0 | | | $0.3807 | $0.5121 | $0.5212 | $0.5726 | $0.6078 | $0.7626 |
| 18 | Zone L | | | | | | | | |
| 19 | Zone 1 | $0.2742 | | | $0.3499 | $0.4956 | $0.4881 | $0.5505 | $0.6768 |
| 20 | Zone 2 | $0.5121 | | $0.3477 | | $0.1691 | $0.2163 | $0.2976 | $0.3841 |
| 21 | Zone 3 | $0.5212 | | $0.2755 | $0.1824 | | $0.2021 | $0.3655 | $0.4222 |
| 22 | Zone 4 | $0.6616 | | $0.6100 | $0.2324 | $0.3533 | | $0.1870 | $0.2671 |
| 23 | Zone 5 | $0.7889 | | $0.5545 | $0.2438 | $0.2951 | $0.1922 | | $0.2346 |
| 24 | Zone 6 | $0.9127 | | $0.6367 | $0.4382 | $0.4828 | $0.3410 | $0.1794 | |

| Line No. | Rate Schedule PAL | Commodity | Overrun |
|---|---|---|---|
| 25 | PAL (Daily) | $0.3967 | $0.3967 |
| 26 | PAL (Term) | $0.3967 | $0.3967 |

| Line No. | Incremental Transportation Services | | Reservation | Commodity | Overrun |
|---|---|---|---|---|---|
| 27 | Stagecoach - CP00-65 | FT-A | $3.7295 | $0.0000 | $0.1226 |
| 28 | ConneXion NY/NJ - CP05-355 | FT-A | $10.4816 | $0.0000 | $0.3446 |
| 29 | Concord - CP08-65 | FT-A | $12.3613 | $0.0000 | $0.4064 |
| 30 | Tewksbury - CP04-60 | FT-IL | $6.2443 | $0.0000 | $0.2053 |
| 31 | 300 Line Market - CP09-444 | FT-A | $26.1318 | $0.0000 | $0.8591 |
| 32 | NSD - CP11-30 | FT-A | $6.3263 | $0.0000 | $0.2080 |
| 33 | Northampton - CP11-36 | FT-A | $28.1911 | $0.0000 | $0.9268 |
| 34 | NEUP - CP11-161 | FT-A | $9.0307 | $0.0000 | $0.2969 |

| Line No. | Storage Services | Deliverability | Space | Inj/With | Overrun |
|---|---|---|---|---|---|
| 35 | FS - PA | $2.0334 | $0.0207 | $0.0073 | $0.2441 |
| 36 | FS - MA | $1.4938 | $0.0205 | $0.0087 | $0.1793 |
| 37 | IS - PA | | $0.1019 | $0.0073 | |
| 38 | IS - MA | | $0.0821 | $0.0087 | |

FUEL AND EPCR

F&LR 1/, 2/, 3/, 4/

| RECEIPT ZONE | DELIVERY ZONE 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | 0.48% | | 1.05% | 1.46% | 1.75% | $\boxed{2.05\%}$ | 2.29% | $\boxed{2.68\%}$ |
| L | | 0.35% | | | | | | |
| 1 | 0.55% | | 0.82% | 1.26% | 1.48% | $\boxed{1.77\%}$ | 2.09% | $\boxed{2.36\%}$ |
| 2 | 1.46% | | 0.86% | 0.34% | 0.46% | 0.67% | 0.99% | 1.26% |
| 3 | 1.75% | | 1.48% | 0.46% | 0.28% | 0.85% | 1.12% | 1.41% |
| 4 | 2.05% | | 1.65% | 0.86% | 0.98% | 0.47% | 0.60% | $\boxed{0.88\%}$ |
| 5 | 2.33% | | 2.09% | 0.99% | 1.13% | 0.60% | 0.59% | $\boxed{0.70\%}$ |
| 6 | 2.74% | | 2.36% | 1.26% | 1.41% | 0.84% | 0.52% | 0.37% |

EPCR 3/, 4/

| RECEIPT ZONE | DELIVERY ZONE 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.0049 | | $0.0189 | $0.0292 | $0.0363 | $\boxed{\$0.0439}$ | $0.0499 | $\boxed{\$0.0599}$ |
| L | | $0.0016 | | | | | | |
| 1 | $0.0066 | | $0.0132 | $0.0242 | $0.0296 | $\boxed{\$0.0368}$ | $0.0451 | $\boxed{\$0.0518}$ |
| 2 | $0.0292 | | $0.0142 | $0.0015 | $0.0043 | $0.0095 | $0.0174 | $0.0238 |
| 3 | $0.0363 | | $0.0296 | $0.0043 | $0.0000 | $0.0139 | $0.0206 | $0.0275 |
| 4 | $0.0439 | | $0.0340 | $0.0141 | $0.0172 | $0.0045 | $0.0079 | $\boxed{\$0.0148}$ |
| 5 | $0.0499 | | $0.0451 | $0.0174 | $0.0206 | $0.0078 | $0.0077 | $\boxed{\$0.0103}$ |
| 6 | $0.0599 | | $0.0518 | $0.0238 | $0.0275 | $0.0138 | $0.0058 | $0.0021 |

1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.26%.
2/ For service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall render only the quantity of gas associated with Losses of 0.26%.
3/ The F&LR's and EPCR's listed above are applicable to FT-A, FT-BH, FT-G, FT-GS, NET, NET-284 and IT.
4/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.

RATES PER DEKATHERM

FIRM STORAGE SERVICE
RATE SCHEDULE FS

| Rate Schedule and Rate | Base Tariff Rate | Max Tariff Rate | F&LR 2/, 3/ | EPCR 2/ |
|---|---|---|---|---|
| FIRM STORAGE SERVICE (FS) - PRODUCTION AREA | | | | |
| Deliverability Rate | $2.8100 | $2.8100 1/ | | |
| Space Rate | $0.0286 | $0.0286 1/ | | |
| Injection Rate | $0.0073 | $0.0073 | 0.80% | $0.0000 |
| Withdrawal Rate | $0.0073 | $0.0073 | | |
| Overrun Rate | $0.3372 | $0.3372 1/ | | |
| FIRM STORAGE SERVICE (FS) - MARKET AREA | | | | |
| Deliverability Rate | $1.5400 | $1.5400 1/ | | |
| Space Rate | $0.0211 | $0.0211 1/ | | |
| Injection Rate | $0.0087 | $0.0087 | 0.80% | $0.0000 |
| Withdrawal Rate | $0.0087 | $0.0087 | | |
| Overrun Rate | $0.1848 | $0.1848 1/ | | |

1/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.000.
2/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.
3/ The applicable F&LR pursuant to Article XXXVII of the General Terms and Conditions, associated with Losses is equal to 0.01%.

**TEXAS EASTERN TRANSMISSION, LP**

**SUMMARY OF RATES**

**PROPOSED RATES 02/01/2015**

### RESERVATION CHARGES

| | CDS | FT-1 | SCT |
|---|---|---|---|
| STX-AAB | 6.8040 | 6.5810 | 2.7220 |
| WLA-AAB | 2.8250 | 2.6020 | 1.1300 |
| ELA-AAB | 2.3750 | 2.1520 | 0.9500 |
| ETX-AAB | 2.1890 | 1.9660 | 0.8760 |
| STX-STX | 5.7350 | 5.5120 | 2.2920 |
| STX-WLA | 5.8950 | 5.6720 | 2.3560 |
| STX-ELA | 6.8110 | 6.5880 | 2.7220 |
| STX-ETX | 6.8100 | 6.5880 | 2.7220 |
| WLA-WLA | 2.0580 | 1.8350 | 0.8220 |
| WLA-ELA | 2.8320 | 2.6090 | 1.1300 |
| WLA-ETX | 2.8320 | 2.6090 | 1.1300 |
| ELA-ELA | 2.3790 | 2.1560 | 0.9500 |
| ETX-ETX | 2.1930 | 1.9700 | 0.8760 |
| ETX-ELA | 2.3790 | 2.1560 | 0.9500 |
| M1-M1 | 4.4480 | 4.2250 | 1.7760 |
| M1-M2 | 8.1370 | 7.9140 | 3.2500 |
| M1-M3 | 10.6530 | 10.4300 | 4.2550 |
| M2-M2 | 6.3460 | 6.1230 | 2.5340 |
| M2-M3 | 9.0000 | 8.7770 | 3.5950 |
| M3-M3 | 5.1750 | 4.9520 | 2.0670 |

| 7(C) RATE SCHEDULES | |
|---|---|
| FTS | 5.3510 |
| FTS-2 | 7.9590 |
| FTS-4 | 7.7440 |
| FTS-5 | 5.1790 |
| FTS-7 | 6.5760 |
| FTS-8 | 6.8640 |
| X-127 | 7.7060 |
| X-129 | 7.5430 |
| X-130 | 7.5430 |
| X-135 | 1.6030 |
| X-137 | 4.0110 |

| SCT DEMAND CHARGES | |
|---|---|
| Access Area | 0.0030 |
| M1-M1 | 0.0040 |
| M1-M2 | 0.0060 |
| M1-M3 | 0.0070 |

### USAGE CHARGES

**CDS & FT-1 USAGE-1**

| Forward Haul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.0195 | 0.0206 | 0.0257 | 0.0257 | 0.0571 | 0.0905 | 0.1161 |
| from WLA | 0.0206 | 0.0162 | 0.0205 | 0.0205 | 0.0519 | 0.0853 | 0.1109 |
| from ELA | 0.0257 | 0.0205 | 0.0182 | 0.0182 | 0.0496 | 0.0830 | 0.1086 |
| from ETX | 0.0257 | 0.0205 | 0.0182 | 0.0182 | 0.0496 | 0.0830 | 0.1086 |
| from M1 | 0.0571 | 0.0519 | 0.0496 | 0.0496 | 0.0314 | 0.0648 | 0.0904 |
| from M2 | 0.0905 | 0.0853 | 0.0830 | 0.0830 | 0.0648 | 0.0391 | 0.0726 |
| from M3 | 0.1161 | 0.1109 | 0.1086 | 0.1086 | 0.0904 | 0.0726 | 0.0383 |

| Backhaul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.0088 | | | | | | |
| from WLA | | 0.0059 | | | | | |
| from ELA | | | 0.0087 | | | | |
| from ETX | | | | 0.0087 | | | |
| from M1 | | | | 0.0343 | 0.0161 | | |
| from M2 | | | | 0.0588 | 0.0406 | 0.0287 | |
| from M3 | | | | | | 0.0455 | 0.0210 |

**SCT USAGE-1**

| Forward Haul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.2006 | 0.2069 | 0.2421 | 0.2421 | 0.4121 | 0.5666 | 0.6749 |
| from WLA | 0.2069 | 0.0764 | 0.1061 | 0.1061 | 0.2761 | 0.4306 | 0.5389 |
| from ELA | 0.2421 | 0.1061 | 0.0890 | 0.0890 | 0.2590 | 0.4135 | 0.5218 |
| from ETX | 0.2421 | 0.1061 | 0.0890 | 0.0828 | 0.2528 | 0.4074 | 0.5156 |
| from M1 | 0.4121 | 0.2761 | 0.2590 | 0.2528 | 0.1700 | 0.3246 | 0.4328 |
| from M2 | 0.5666 | 0.4306 | 0.4135 | 0.4074 | 0.3246 | 0.2401 | 0.3608 |
| from M3 | 0.6749 | 0.5389 | 0.5218 | 0.5156 | 0.4328 | 0.3608 | 0.2008 |

| Backhaul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.1899 | | | | | | |
| from WLA | | 0.0661 | | | | | |
| from ELA | | | 0.0795 | | | | |
| from ETX | | | | 0.0733 | | | |
| from M1 | | | | 0.2375 | 0.1547 | | |
| from M2 | | | | 0.3832 | 0.3004 | 0.2297 | |
| from M3 | | | | | | 0.3337 | 0.1835 |

**IT-1 USAGE-1**

| Forward Haul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.2007 | 0.2071 | 0.2423 | 0.2423 | 0.4126 | 0.5672 | 0.6756 |
| from WLA | 0.2071 | 0.0765 | 0.1063 | 0.1063 | 0.2766 | 0.4312 | 0.5396 |
| from ELA | 0.2423 | 0.1063 | 0.0892 | 0.0891 | 0.2594 | 0.4140 | 0.5224 |
| from ETX | 0.2423 | 0.1063 | 0.0891 | 0.0829 | 0.2532 | 0.4078 | 0.5162 |
| from M1 | 0.4126 | 0.2766 | 0.2594 | 0.2532 | 0.1703 | 0.3249 | 0.4333 |
| from M2 | 0.5672 | 0.4312 | 0.4140 | 0.4078 | 0.3249 | 0.2404 | 0.3611 |
| from M3 | 0.6756 | 0.5396 | 0.5224 | 0.5162 | 0.4333 | 0.3611 | 0.2012 |

| Backhaul | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.1900 | | | | | | |
| from WLA | | 0.0662 | | | | | |
| from ELA | | | 0.0797 | | | | |
| from ETX | | | | 0.0734 | | | |
| from M1 | | | | 0.2379 | 0.1550 | | |
| from M2 | | | | 0.3836 | 0.3007 | 0.2300 | |
| from M3 | | | | | | 0.3340 | 0.1839 |

**OTHER TRANSPORTATION SERVICES**

| | Reservation | Usage-1 | Shrinkage | |
|---|---|---|---|---|
| | | | In Path | Out-of-Path |
| LLFT | 3.3400 | 0.0023 | 0.43% | |
| | 3.3420 1/ | | | |
| LLIT | | 0.1121 | 0.43% | |
| | | 0.1121 1/ | 0.43% | |
| VKFT | 0.0945 | | 0.00% | |
| VKIT | | 0.0945 | 0.00% | |
| FT-1/FTS | 0.6600 | | 0.00% | |
| FT-1/FTS-4 | 3.0110 | | 0.00% | |
| FT-1/M1 | 6.7880 | | 0.48% | |
| FT-1/NC | 6.5600 | | 0.00% | |
| FT-1/RIV | 10.4390 | | 0.00% | |
| FT-1/PLP | 1.9410 | | 0.00% | |
| FT-1/L1A | 1.5830 | | 0.00% | |
| FT-1/LEP | 4.4610 | | 0.00% | |
| FT-1/IRW | 0.6040 2/ | | 0.00% | |
| FT-1/IRW | 1.2690 3/ | | 0.00% | |
| FT-1/TME | 13.8240 | | 2.56% | 3.25% |
| FT-1/TME2 | 23.7640 | | 1.06% | 3.25% |
| FT-1/TME3 | 23.8300 | -0.0066 | 0.97% | |
| FT-1/TMX | 19.8470 | 0.0000 | 1.36% | |
| FT-1/MX | 3.1240 | | 0.32% | |
| FT-1/TME12 | 18.3510 | -0.0047 | 1.07% | |
| FT-1/TME14 | 13.7990 | 0.0000 | 1.67% | |
| FT-1/PEP | 8.4140 | 0.0000 | 0.03% | |
| FT-1/NJNY | 26.0650 | -0.0056 | 0.43% | |
| FT-1/MHX | 20.8790 | | 0.01% | |
| MLS-1/FH | 0.6510 | | 0.01% | |
| MLS-1/FA | 0.8690 | 0.0286 4/ | 0.00% | |
| MLS-1/HR | 1.1120 | 0.0366 4/ | 0.01% | |
| MLS-1/CB | 0.9270 | 0.0305 4/ | 0.01% | |
| MLS-1/HS | 6.1130 | 0.2010 4/ | 0.01% | |

1/ Pursuant to Section 26 of the General Terms and Conditions
2/ Effective Oct 1 through Apr 30
3/ Effective May 1 through Sep 30
4/ Per Section 3.3 of MLS-1 Rate Schedule

**STORAGE SERVICES**

| | RES. | SPACE | INJ. | WITH. |
|---|---|---|---|---|
| SS | 5.3380 | 0.1293 | 0.0435 | 0.0786 |
| SS-1 | 5.4360 | 0.1293 | 0.0435 | 0.0785 |
| X-28 | 4.7400 | 0.1293 | 0.0435 | 0.0743 |
| FSS-1 | 0.8960 | 0.1293 | 0.0435 | 0.0435 |
| ISS-1 | | 0.0323 | 0.1993 | 0.0435 |

**SHRINKAGE PERCENTAGES**

**ASA TRANSPORTATION RATE SCHEDULES**

**December 1 through March 31 FOR TRANSPORTATION SERVICE**

| | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 1.23% | 1.31% | 1.77% | 1.77% | 3.73% | 5.14% | 6.09% |
| from WLA | 1.31% | 1.14% | 1.71% | 1.71% | 3.67% | 5.08% | 6.03% |
| from ELA | 1.77% | 1.71% | 1.22% | 1.22% | 3.18% | 4.59% | 5.54% |
| from ETX | 1.77% | 1.71% | 1.22% | 1.22% | 3.18% | 4.59% | 5.54% |
| from M1 | 3.73% | 3.67% | 3.18% | 3.18% | 1.96% | 3.37% | 4.32% |
| from M2 | 5.14% | 5.08% | 4.59% | 4.59% | 3.37% | 1.36% | 3.65% |
| from M3 | 6.09% | 6.03% | 5.54% | 5.54% | 4.32% | 3.65% | 2.24% |

**December 1 through March 31 FOR TRANSPORTATION SERVICE WITH PARTIAL BACKHAUL PATHS**

| | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.00% | | | | | | |
| from WLA | | 0.00% | | | | | |
| from ELA | | | 0.00% | | | | |
| from ETX | | | | 1.22% | | | |
| from M1 | | | | 1.22% | 0.00% | | |
| from M2 | | | | 1.22% | 0.00% | 0.00% | |
| from M3 | | | | | | 0.00% | 0.00% |

**April 1 through November 30 FOR TRANSPORTATION SERVICE**

| | STX | WLA | ELA | ETX | M1 | M2 | M3 |
|---|---|---|---|---|---|---|---|
| from STX | 0.97% | 1.02% | 1.30% | 1.30% | 3.13% | 4.14% | 4.82% |
| from WLA | 1.02% | 0.81% | 1.11% | 1.11% | 2.94% | 3.95% | 4.63% |
| from ELA | 1.30% | 1.11% | 1.12% | 1.12% | 2.95% | 3.96% | 4.64% |
| from ETX | 1.30% | 1.11% | 1.12% | 1.12% | 2.95% | 3.96% | 4.64% |
| from M1 | 3.13% | 2.94% | 2.95% | 2.95% | 1.83% | 2.84% | 3.52% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **from M2** | 4.14% | 3.95% | 3.96% | 3.96% | 2.84% | 1.25% | 3.04% |
| **from M3** | 4.82% | 4.63% | 4.64% | 4.64% | 3.52% | 3.04% | 2.04% |

**April 1 through November 30 FOR TRANSPORTATION SERVICE WITH PARTIAL BACKHAUL PATHS**

| | **STX** | **WLA** | **ELA** | **ETX** | **M1** | **M2** | **M3** |
|---|---|---|---|---|---|---|---|
| **from STX** | 0.00% | | | | | | |
| **from WLA** | | 0.00% | | | | | |
| **from ELA** | | | 0.00% | | | | |
| **from ETX** | | | | 1.12% | | | |
| **from M1** | | | | 1.12% | 0.00% | | |
| **from M2** | | | | 1.12% | 0.00% | 0.00% | |
| **from M3** | | | | | | 0.00% | 0.00% |

**NON-ASA RATE SCHEDULES**

| | | | |
|---|---|---|---|
| **FTS-4 LEIDY** | | **FTS** | 1.29% |
| **(Apr 1-Nov 14)** | 1.00% | **FTS-2** | 0.00% |
| **(Nov 15-Mar 31)** | 4.89% | **X-127** | 0.00% |
| **FTS-4 CHMSBG** | 0.00% | **X-129** | 0.00% |
| **FTS-5** | 0.00% | **X-130** | 0.00% |
| **FTS-7 M3** | 2.00% | **X-135** | 0.00% |
| **FTS-7 M1 & M2** | 0.00% | **X-137** | 1.30% |
| **FTS-8 M3** | 1.50% | | |
| **FTS-8 M1 & M2** | 0.00% | | |

**ASA STORAGE RATE SCHEDULES**

| **STORAGE SERVICE** | 12/01-3/31 | 04/01-11/30 |
|---|---|---|
| **WITHDRAWALS:** | | |
| **SS,SS-1,X-28** | 2.88% | 2.72% |
| **FSS-1,ISS-1** | 0.80% | 0.80% |
| **INJECTIONS** | 0.80% | 0.80% |
| **INVENTORY LEVEL** | 0.08% | 0.08% |

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**SURCHARGES**

**ACA Commodity Surcharge to applicable customers, pursuant to section 15.5 of the General Terms and Conditions**

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**The Summary of Rates serves as a handy reference and does not replace Texas Eastern's Tariff.**

## Canadian Fixed Transportation Rates

| Line | Item | Units | 2015 Final Tolls | Reference |
|---|---|---|---|---|
| 1 | Parkway to Iroquois on TCPL | | | |
| 2 | Demand Toll | $CAD / GJ | $ 14.36427 | Page 30 |
| 3 | Delivery Pressure Demand Toll | $CAD / GJ | $ 1.01227 | Page 28 |
| 4 | Abandonment Surcharge | $CAD / GJ | $ 0.68863 | Page 30 |
| 5 | Total Demand Toll | $CAD / GJ | $ 16.06517 | Line 2 plus Line 3 |
| 6 | $CAD to $US | Ratio | 0.7920 | Page 27 |
| 7 | Total Demand Toll | $US / GJ | $ 12.7236 | Line 4 times Line 5 |
| 8 | GJ per Dth | Ratio | 1.055056 | |
| 9 | Total Demand Toll | $US / Dth | $ 13.4241 | Line 6 divided by Line 7 |
| 10 | | | | |
| 11 | Union Dawn to East Hereford on TCPL | | | |
| 12 | Demand Toll | $CAD / GJ | $ 29.48683 | Page 29 |
| 13 | Union Dawn Surcharge | $CAD / GJ | $ 0.10724 | Page 28 |
| 14 | Delivery Pressure Demand Toll | $CAD / GJ | $ 1.01227 | Page 28 |
| 15 | Abandonment Surcharge | $CAD / GJ | $ 1.64617 | Page 29 |
| 16 | Total Demand Toll | $CAD / GJ | $ 32.25251 | Sum Lines Above. |
| 17 | $CAD to $US | Ratio | 0.7920 | Page 27 |
| 18 | Total Demand Toll | $US / GJ | $ 25.5440 | Line 13 times Line 14 |
| 19 | GJ per Dth | Ratio | 1.055056 | |
| 20 | Total Demand Toll | $US / Dth | $ 26.9504 | Line 15 divided by Line 16 |
| 21 | | | | |
| 22 | Dawn to Parkway on Union Pipeline | | | |
| 23 | Total Demand Toll | $CAD / GJ | $ 2.6040 | Page 34 |
| 24 | $CAD to $US | Ratio | 0.7920 | Page 27 |
| 25 | Total Demand Toll | $US / GJ | $ 2.0624 | Line 13 times Line 14 |
| 26 | GJ per Dth | Ratio | 1.055056 | |
| 27 | Total Demand Toll | $US / Dth | $ 2.1759 | Line 15 divided by Line 16 |
| 28 | | | | |
| 29 | St. Clair to Dawn on Vector Canada | | | |
| 30 | Total Demand Toll | $CAD / GJ | $ 0.4623 | Page 38 |
| 31 | $CAD to $US | Ratio | 0.7920 | Page 27 |
| 32 | Total Demand Toll | $US / GJ | $ 0.3661 | Line 13 times Line 14 |
| 33 | GJ per Dth | Ratio | 1.055056 | |
| 34 | Total Demand Toll | $US / Dth | $ 0.3863 | Line 15 divided by Line 16 |

BANK OF CANADA
BANQUE DU CANADA

# Daily Currency Converter

All Bank of Canada exchange rates are indicative rates only, obtained from averages of transaction prices and price quotes from financial institutions. Please read our full **terms and conditions** (http://www.bankofcanada.ca/terms/#fx-rates) for details.

Convert to and from Canadian dollars, using the latest noon rates.

Currency Converter
Amount:
1.00
From:
Canadian Dollar
To:
U.S. dollar
☐ Use cash rate
Convert
Answer:
0.79
Exchange Rate:
0.7920
Summary:
On 6 July 2015, 1.00 Canadian Dollar(s) = 0.79 U.S. dollar(s), at an exchange rate of 0.7920 (using nominal rate).

## See Also

10-Year Currency Converter (http://www.bankofcanada.ca/rates/exchange/10-year-converter/)

### Why is the Currency I'm Looking for Not Listed Here?

The Bank currently collects data for about 55 foreign currencies. This data is intended primarily for people with a research interest in foreign exchange markets, and represents a sampling of currencies from various regions. It is not meant to be an exhaustive listing of all world currencies.

### Are the Exchange Rates Shown Here Accepted by Canada Revenue Agency?

Yes. The Agency accepts Bank of Canada exchange rates as the basis for calculations involving income and expenses that are denominated in foreign currencies.

Final Mainline Transportation Tolls Effective July 1, 2015 and
Final Abandonment Surcharges Effective January 1, 2015

**Storage Transportation Service**

| Line No | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) |
| 1 | Centram MDA | 5.23197 | 0.17201 | 0.25380 | 0.0083 |
| 2 | Union WDA | 39.71839 | 1.30581 | 2.29401 | 0.0754 |
| 3 | Union NDA | 16.92748 | 0.55652 | 0.85092 | 0.0280 |
| 4 | Union EDA | 11.84212 | 0.38933 | 0.52893 | 0.0174 |
| 5 | KPUC EDA | 11.39043 | 0.37448 | 0.50032 | 0.0164 |
| 6 | GMIT EDA | 19.47488 | 0.64027 | 1.01224 | 0.0333 |
| 7 | Enbridge CDA | 5.88532 | 0.19349 | 0.15176 | 0.0050 |
| 8 | Enbridge CDA (Amended) | 6.05839 | 0.19918 | 0.16269 | 0.0053 |
| 9 | Enbridge EDA | 15.16514 | 0.49858 | 0.73933 | 0.0243 |
| 10 | Cornwall | 15.38840 | 0.50592 | 0.75348 | 0.0248 |
| 11 | Philipsburg | 19.52568 | 0.64194 | 1.01543 | 0.0334 |

**Firm Transportation - Short Notice**

| Line No | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) |
| 12 | Kirkwall to Thorold CDA | 6.98093 | 0.22951 | 0.18094 | 0.0059 |
| 13 | Union Parkway Belt to Goreway CDA | 5.19730 | 0.17087 | 0.07829 | 0.0026 |
| 14 | Union Parkway Belt to Victoria Square #2 CDA | 6.07695 | 0.19979 | 0.13244 | 0.0044 |
| 15 | Union Parkway Belt to Schomberg #2 CDA | 6.13839 | 0.20181 | 0.12891 | 0.0042 |

**Enhanced Market Balancing Service**

| Line No | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) |
| 16 | Union Parkway Belt to Union EDA | 13.02633 | 0.42826 | 0.52893 | 0.0174 |

**Delivery Pressure**

| Line No | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 17 | Average Delivery Pressure Toll | 1.01227 | 0.03328 |

Note: Delivery Pressure toll applies to the following locations: Emerson 1 , Emerson 2, Union SWDA, Enbridge SWDA, Dawn Export, Niagara Falls, Iroquois, Chippawa and East Hereford.
The Daily Equivalent Toll is only applicable to STS Injections, IT, Diversions, STFT and SSS.

**Union Dawn Receipt Point Surcharge**

| Line No | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 18 | Union Dawn Receipt Point Surcharge | 0.10724 | 0.00353 |

**Short Notice Balancing (SNB) Service**

| Line No. | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 19 | SNB Toll | | |
| Note: | This SNB Toll is a representative toll for the Eastern Region. | 3.42005 | 0.1124 |

**Energy Deficient Gas Allowance (EDGA) Service**

| Line No | Particulars | Capacity Charge ($/GJ/D) |
|---|---|---|
| | (a) | (b) |
| 20 | Western Section | 1.52481 |
| 21 | Eastern Section | 0.41865 |

Note: The EDGA Service capacity charge for the Western Section is the effective Empress to North Bay Junction FT Toll and the capacity charge for the Eastern Section is the effective Parkway to North Bay Junction FT Toll.
The EDGA Service fuel charge for the Western Section includes the effective Empress to North Bay Junction monthly fuel ratio and the fuel charge for the Eastern Section includes the effective Parkway to North Bay Junction monthly fuel ratio.

| Line No. | Receipt Point | Delivery Point | FT Toll ($/GJ/Month) | Daily Equivalent FT for IT / STFT ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|---|
| 1 | Union ECDA | Union NDA | - | 0.5656 | - | 0.0286 |
| 2 | Union ECDA | Calstock NDA | - | 0.9008 | - | 0.0498 |
| 3 | Union ECDA | Tunis NDA | - | 0.6938 | - | 0.0367 |
| 4 | Union ECDA | GMIT NDA | - | 0.5400 | - | 0.0269 |
| 5 | Union ECDA | Union SSMDA | - | 0.8061 | - | 0.0438 |
| 6 | Union ECDA | Union NCDA | - | 0.2883 | - | 0.0110 |
| 7 | Union ECDA | Union CDA | - | 0.1488 | - | 0.0022 |
| 8 | Union ECDA | Enbridge CDA | - | 0.1996 | - | 0.0054 |
| 9 | Union ECDA | Union EDA | - | 0.3985 | - | 0.0180 |
| 10 | Union ECDA | Enbridge EDA | - | 0.5077 | - | 0.0249 |
| 11 | Union ECDA | KPUC EDA | - | 0.3836 | - | 0.0170 |
| 12 | Union ECDA | GMIT EDA | - | 0.6494 | - | 0.0339 |
| 13 | Union ECDA | Enbridge SWDA | - | 0.3224 | - | 0.0132 |
| 14 | Union ECDA | Union SWDA | - | 0.3253 | - | 0.0133 |
| 15 | Union ECDA | Chippawa | - | 0.2311 | - | 0.0074 |
| 16 | Union ECDA | Cornwall | - | 0.5151 | - | 0.0254 |
| 17 | Union ECDA | East Hereford | - | 0.7982 | - | 0.0433 |
| 18 | Union ECDA | Emerson 1 | - | 1.5863 | - | 0.0932 |
| 19 | Union ECDA | Emerson 2 | - | 1.5863 | - | 0.0932 |
| 20 | Union ECDA | Iroquois | - | 0.4814 | - | 0.0232 |
| 21 | Union ECDA | Kirkwall | - | 0.1724 | - | 0.0037 |
| 22 | Union ECDA | Napierville | - | 0.6372 | - | 0.0331 |
| 23 | Union ECDA | Niagara Falls | - | 0.2292 | - | 0.0073 |
| 24 | Union ECDA | North Bay Junction | - | 0.4278 | - | 0.0198 |
| 25 | Union ECDA | Philipsburg | - | 0.6511 | - | 0.0340 |
| 26 | Union ECDA | Spruce | - | 1.6833 | - | 0.0993 |
| 27 | Union ECDA | St. Clair | - | 0.3413 | - | 0.0144 |
| 28 | Union ECDA | Welwyn | - | 1.9136 | - | 0.1139 |
| 29 | Union ECDA | Dawn Export | - | 0.3224 | - | 0.0132 |
| 30 | Union ECDA | Union Parkway Belt | - | 0.1421 | - | 0.0017 |
| 31 | Union ECDA | Union CDA (Amended) | - | 0.1753 | - | 0.0038 |
| 32 | Union ECDA | Union ECDA | - | 0.1329 | - | 0.0012 |
| 33 | Union ECDA | Enbridge Parkway CDA | - | 0.1421 | - | 0.0017 |
| 34 | Union ECDA | Enbridge CDA (Amended) | - | 0.2050 | - | 0.0057 |
| 35 | Union Dawn | Empress | 67.22905 | 2.2103 | 4.03598 | 0.1327 |
| 36 | Union Dawn | TransGas SSDA | 56.73986 | 1.8654 | 3.37181 | 0.1109 |
| 37 | Union Dawn | Centram SSDA | 52.44229 | 1.7241 | 3.09969 | 0.1019 |
| 38 | Union Dawn | Centram MDA | 45.94133 | 1.5104 | 2.68805 | 0.0884 |
| 39 | Union Dawn | Centrat MDA | 45.91822 | 1.5096 | 2.68658 | 0.0883 |
| 40 | Union Dawn | Union WDA | 44.86702 | 1.4751 | 2.62003 | 0.0861 |
| 41 | Union Dawn | Nipigon WDA | 40.60412 | 1.3349 | 2.35010 | 0.0773 |
| 42 | Union Dawn | Union NDA | 22.41374 | 0.7369 | 1.19830 | 0.0394 |
| 43 | Union Dawn | Calstock NDA | 32.60697 | 1.0720 | 1.84374 | 0.0606 |
| 44 | Union Dawn | Tunis NDA | 26.31072 | 0.8650 | 1.44508 | 0.0475 |
| 45 | Union Dawn | GMIT NDA | 21.63264 | 0.7112 | 1.14883 | 0.0378 |
| 46 | Union Dawn | Union SSMDA | 18.75522 | 0.6166 | 0.96666 | 0.0318 |
| 47 | Union Dawn | Union NCDA | 13.97828 | 0.4596 | 0.66418 | 0.0218 |
| 48 | Union Dawn | Union CDA | 9.65334 | 0.3174 | 0.39035 | 0.0128 |
| 49 | Union Dawn | Enbridge CDA | 11.13767 | 0.3662 | 0.48430 | 0.0159 |
| 50 | Union Dawn | Union EDA | 17.32685 | 0.5697 | 0.87623 | 0.0288 |
| 51 | Union Dawn | Enbridge EDA | 20.65048 | 0.6789 | 1.08668 | 0.0357 |
| 52 | Union Dawn | KPUC EDA | 16.87578 | 0.5548 | 0.84766 | 0.0279 |
| 53 | Union Dawn | GMIT EDA | 24.96083 | 0.8206 | 1.35959 | 0.0447 |
| 54 | Union Dawn | Enbridge SWDA | 4.04238 | 0.1329 | 0.03504 | 0.0012 |
| 55 | Union Dawn | Union SWDA | 4.12876 | 0.1357 | 0.04054 | 0.0013 |
| 56 | Union Dawn | Chippawa | 11.35454 | 0.3733 | 0.49807 | 0.0164 |
| 57 | Union Dawn | Cornwall | 20.87405 | 0.6863 | 1.10082 | 0.0362 |
| 58 | Union Dawn | East Hereford | 29.48683 | 0.9694 | 1.64617 | 0.0541 |
| 59 | Union Dawn | Emerson 1 | 42.48691 | 1.3968 | 2.46932 | 0.0812 |
| 60 | Union Dawn | Emerson 2 | 42.48691 | 1.3968 | 2.46932 | 0.0812 |
| 61 | Union Dawn | Iroquois | 19.84992 | 0.6526 | 1.03597 | 0.0341 |
| 62 | Union Dawn | Kirkwall | 8.60427 | 0.2829 | 0.32389 | 0.0106 |
| 63 | Union Dawn | Napierville | 24.58883 | 0.8084 | 1.33604 | 0.0439 |
| 64 | Union Dawn | Niagara Falls | 11.29705 | 0.3714 | 0.49441 | 0.0163 |
| 65 | Union Dawn | North Bay Junction | 18.21958 | 0.5990 | 0.93274 | 0.0307 |
| 66 | Union Dawn | Philipsburg | 25.01102 | 0.8223 | 1.36277 | 0.0448 |
| 67 | Union Dawn | Spruce | 45.91822 | 1.5096 | 2.68658 | 0.0883 |
| 68 | Union Dawn | St. Clair | 4.61816 | 0.1518 | 0.07153 | 0.0024 |
| 69 | Union Dawn | Welwyn | 52.44229 | 1.7241 | 3.09969 | 0.1019 |
| 70 | Union Dawn | Dawn Export | 4.04238 | 0.1329 | 0.03504 | 0.0012 |
| 71 | Union Dawn | Union Parkway Belt | 9.52802 | 0.3133 | 0.38239 | 0.0126 |
| 72 | Union Dawn | Union CDA (Amended) | 9.39753 | 0.3090 | 0.37414 | 0.0123 |
| 73 | Union Dawn | Union ECDA | 9.80664 | 0.3224 | 0.40002 | 0.0132 |
| 74 | Union Dawn | Enbridge Parkway CDA | 9.52802 | 0.3133 | 0.38239 | 0.0126 |
| 75 | Union Dawn | Enbridge CDA (Amended) | 11.28793 | 0.3711 | 0.49384 | 0.0162 |
| 76 | Union EDA | Empress | - | 2.5656 | - | 0.1552 |

| Line No. | Receipt Point | Delivery Point | FT Toll ($/GJ/Month) | Daily Equivalent FT for IT / STFT ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|---|
| 1 | Union NCDA | Union Parkway Belt | - | 0.2792 | - | 0.0104 |
| 2 | Union NCDA | Union CDA (Amended) | - | 0.3277 | - | 0.0135 |
| 3 | Union NCDA | Union ECDA | - | 0.2883 | - | 0.0110 |
| 4 | Union NCDA | Enbridge Parkway CDA | - | 0.2792 | - | 0.0104 |
| 5 | Union NCDA | Enbridge CDA (Amended) | - | 0.2737 | - | 0.0101 |
| 6 | Union NDA | Empress | - | 1.4286 | - | 0.1224 |
| 7 | Union NDA | TransGas SSDA | - | 1.1879 | - | 0.1005 |
| 8 | Union NDA | Centram SSDA | - | 1.0893 | - | 0.0916 |
| 9 | Union NDA | Centram MDA | - | 0.9409 | - | 0.0781 |
| 10 | Union NDA | Centrat MDA | - | 0.8727 | - | 0.0719 |
| 11 | Union NDA | Union WDA | - | 0.6155 | - | 0.0486 |
| 12 | Union NDA | Nipigon WDA | - | 0.5101 | - | 0.0390 |
| 13 | Union NDA | Union NDA | - | 0.0927 | - | 0.0012 |
| 14 | Union NDA | Calstock NDA | - | 0.3266 | - | 0.0224 |
| 15 | Union NDA | Tunis NDA | - | 0.1989 | - | 0.0108 |
| 16 | Union NDA | GMIT NDA | - | 0.1848 | - | 0.0095 |
| 17 | Union NDA | Union SSMDA | - | 0.8518 | - | 0.0700 |
| 18 | Union NDA | Union NCDA | - | 0.3072 | - | 0.0187 |
| 19 | Union NDA | Union CDA | - | 0.4349 | - | 0.0295 |
| 20 | Union NDA | Enbridge CDA | - | 0.4132 | - | 0.0277 |
| 21 | Union NDA | Union EDA | - | 0.4902 | - | 0.0342 |
| 22 | Union NDA | Enbridge EDA | - | 0.4480 | - | 0.0306 |
| 23 | Union NDA | KPUC EDA | - | 0.5277 | - | 0.0373 |
| 24 | Union NDA | GMIT EDA | - | 0.5801 | - | 0.0418 |
| 25 | Union NDA | Enbridge SWDA | - | 0.5522 | - | 0.0394 |
| 26 | Union NDA | Union SWDA | - | 0.5543 | - | 0.0396 |
| 27 | Union NDA | Chippawa | - | 0.4975 | - | 0.0348 |
| 28 | Union NDA | Cornwall | - | 0.4798 | - | 0.0333 |
| 29 | Union NDA | East Hereford | - | 0.6919 | - | 0.0512 |
| 30 | Union NDA | Emerson 1 | - | 0.9514 | - | 0.0791 |
| 31 | Union NDA | Emerson 2 | - | 0.9514 | - | 0.0791 |
| 32 | Union NDA | Iroquois | - | 0.4600 | - | 0.0316 |
| 33 | Union NDA | Kirkwall | - | 0.4398 | - | 0.0299 |
| 34 | Union NDA | Napierville | - | 0.5713 | - | 0.0410 |
| 35 | Union NDA | Niagara Falls | - | 0.4961 | - | 0.0347 |
| 36 | Union NDA | North Bay Junction | - | 0.1893 | - | 0.0099 |
| 37 | Union NDA | Philipsburg | - | 0.5817 | - | 0.0419 |
| 38 | Union NDA | Spruce | - | 0.8727 | - | 0.0719 |
| 39 | Union NDA | St. Clair | - | 0.5274 | - | 0.0406 |
| 40 | Union NDA | Welwyn | - | 1.0893 | - | 0.0916 |
| 41 | Union NDA | Dawn Export | - | 0.5522 | - | 0.0394 |
| 42 | Union NDA | Union Parkway Belt | - | 0.4170 | - | 0.0280 |
| 43 | Union NDA | Union CDA (Amended) | - | 0.4534 | - | 0.0311 |
| 44 | Union NDA | Union ECDA | - | 0.4238 | - | 0.0286 |
| 45 | Union NDA | Enbridge Parkway CDA | - | 0.4170 | - | 0.0280 |
| 46 | Union NDA | Enbridge CDA (Amended) | - | 0.4128 | - | 0.0276 |
| 47 | Union Parkway Belt | Empress | 72.71500 | 2.3906 | 4.38333 | 0.1441 |
| 48 | Union Parkway Belt | TransGas SSDA | 62.22550 | 2.0458 | 3.71915 | 0.1223 |
| 49 | Union Parkway Belt | Centram SSDA | 57.92793 | 1.9045 | 3.44704 | 0.1133 |
| 50 | Union Parkway Belt | Centram MDA | 51.42698 | 1.6908 | 3.03541 | 0.0998 |
| 51 | Union Parkway Belt | Centrat MDA | 50.92176 | 1.6741 | 3.00341 | 0.0987 |
| 52 | Union Parkway Belt | Union WDA | 39.71839 | 1.3058 | 2.29401 | 0.0754 |
| 53 | Union Parkway Belt | Nipigon WDA | 35.11878 | 1.1546 | 2.00276 | 0.0658 |
| 54 | Union Parkway Belt | Union NDA | 16.92748 | 0.5565 | 0.85092 | 0.0280 |
| 55 | Union Parkway Belt | Calstock NDA | 27.12102 | 0.8917 | 1.49639 | 0.0492 |
| 56 | Union Parkway Belt | Tunis NDA | 20.82538 | 0.6847 | 1.09773 | 0.0361 |
| 57 | Union Parkway Belt | GMIT NDA | 16.14638 | 0.5308 | 0.80147 | 0.0263 |
| 58 | Union Parkway Belt | Union SSMDA | 24.24117 | 0.7970 | 1.31401 | 0.0432 |
| 59 | Union Parkway Belt | Union NCDA | 8.49264 | 0.2792 | 0.31683 | 0.0104 |
| 60 | Union Parkway Belt | Union CDA | 4.76720 | 0.1567 | 0.08094 | 0.0027 |
| 61 | Union Parkway Belt | Enbridge CDA | 5.88532 | 0.1935 | 0.15176 | 0.0050 |
| 62 | Union Parkway Belt | Union EDA | 11.84212 | 0.3893 | 0.52893 | 0.0174 |
| 63 | Union Parkway Belt | Enbridge EDA | 15.16514 | 0.4986 | 0.73933 | 0.0243 |
| 64 | Union Parkway Belt | KPUC EDA | 11.39043 | 0.3745 | 0.50032 | 0.0164 |
| 65 | Union Parkway Belt | GMIT EDA | 19.47488 | 0.6403 | 1.01224 | 0.0333 |
| 66 | Union Parkway Belt | Enbridge SWDA | 9.52802 | 0.3133 | 0.38239 | 0.0126 |
| 67 | Union Parkway Belt | Union SWDA | 9.61501 | 0.3161 | 0.38790 | 0.0128 |
| 68 | Union Parkway Belt | Chippawa | 7.30852 | 0.2403 | 0.24188 | 0.0080 |
| 69 | Union Parkway Belt | Cornwall | 15.38840 | 0.5059 | 0.75348 | 0.0248 |
| 70 | Union Parkway Belt | East Hereford | 24.00088 | 0.7891 | 1.29882 | 0.0427 |
| 71 | Union Parkway Belt | Emerson 1 | 47.97256 | 1.5772 | 2.81666 | 0.0926 |
| 72 | Union Parkway Belt | Emerson 2 | 47.97256 | 1.5772 | 2.81666 | 0.0926 |
| 73 | Union Parkway Belt | Iroquois | 14.36427 | 0.4723 | 0.68863 | 0.0226 |
| 74 | Union Parkway Belt | Kirkwall | 4.96613 | 0.1633 | 0.09354 | 0.0031 |
| 75 | Union Parkway Belt | Napierville | 19.10349 | 0.6281 | 0.98870 | 0.0325 |
| 76 | Union Parkway Belt | Niagara Falls | 7.25103 | 0.2384 | 0.23822 | 0.0078 |

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## TRANSPORTATION RATES

(A) Applicability

The charges under this schedule shall be applicable to a Shipper who enters into a Transportation Service Contract with Union.

Applicable Points

Dawn as a receipt point: Dawn (TCPL), Dawn (Facilities), Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE).

Dawn as a delivery point: Dawn (Facilities).

(B) Services

Transportation Service under this rate schedule shall be for transportation on Union's Dawn - Trafalgar facilities.

(C) Rates

The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

| | Monthly Demand Charge (applied to daily contract demand) Rate/GJ | Commodity and Fuel Charges Fuel Ratio % | AND | Commodity Charge Rate/GJ |
|---|---|---|---|---|
| Firm Transportation (1) | | | | |
| Dawn to Parkway | $\boxed{\$2.604}$ | | | |
| Dawn to Kirkwall | $2.193 | Monthly fuel rates and ratios shall be in accordance with schedule "C". | | |
| Kirkwall to Parkway | $0.411 | | | |
| Parkway to Dawn | n/a | | | |
| M12-X Firm Transportation | | | | |
| Between Dawn, Kirkwall and Parkway | $3.244 | Monthly fuel rates and ratios shall be in accordance with schedule "C". | | |
| Limited Firm/Interruptible Transportation (1) | | | | |
| Dawn to Parkway – Maximum | $6.250 | Monthly fuel rates and ratios shall be in accordance with schedule "C". | | |
| Dawn to Kirkwall – Maximum | $6.250 | | | |
| Parkway (TCPL) to Parkway (Cons) (2) | | 0.155% | | |

Authorized Overrun (3)

Authorized overrun rates will be payable on all quantities in excess of Union's obligation on any day. The overrun charges payable will be calculated at the following rates. Overrun will be authorized at Union's sole discretion.

| Transportation Overrun | If Union supplies fuel Commodity Charge Rate/GJ | Commodity and Fuel Charges Fuel Ratio % | AND | Commodity Charge Rate/GJ |
|---|---|---|---|---|
| Dawn to Parkway | | | | $0.086 |
| Dawn to Kirkwall | | Monthly fuel rates and ratios shall be in accordance with schedule "C". | | $0.072 |
| Kirkwall to Parkway | | | | $0.014 |
| Parkway to Dawn | | | | $0.086 |
| Parkway (TCPL) Overrun (4) | n/a | 0.694% | | n/a |
| M12-X Firm Transportation | | | | |
| Between Dawn, Kirkwall and Parkway | | Monthly fuel rates and ratios shall be in accordance with schedule "C". | | $0.107 |

Schedule "C"

**UNION GAS LIMITED**

**M12 Monthly Transportation Fuel Ratios and Rates**

Firm or Interruptible Transportation Commodity

Effective April 1, 2015

| | VT1 Easterly Dawn to Parkway (TCPL) With Dawn Compression | | VT1 Easterly Dawn to Kirkwall, Lisgar, Parkway (Consumers) With Dawn Compression | | VT3 Westerly Parkway to Kirkwall, Dawn | |
|---|---|---|---|---|---|---|
| Month | Fuel Ratio (%) | Fuel Rate ($/GJ) | Fuel Ratio (%) | Fuel Rate ($/GJ) | Fuel Ratio (%) | Fuel Rate ($/GJ) |
| April | 0.850 | 0.043 | 0.537 | 0.027 | 0.155 | 0.008 |
| May | 0.603 | 0.030 | 0.365 | 0.018 | 0.155 | 0.008 |
| June | 0.501 | 0.025 | 0.268 | 0.013 | 0.393 | 0.020 |
| July | 0.487 | 0.025 | 0.255 | 0.013 | 0.391 | 0.020 |
| August | 0.388 | 0.020 | 0.156 | 0.008 | 0.391 | 0.020 |
| September | 0.383 | 0.019 | 0.156 | 0.008 | 0.387 | 0.019 |
| October | 0.729 | 0.037 | 0.457 | 0.023 | 0.155 | 0.008 |
| November | 0.870 | 0.044 | 0.613 | 0.031 | 0.155 | 0.008 |
| December | 0.981 | 0.049 | 0.722 | 0.036 | 0.155 | 0.008 |
| January | 1.131 | 0.057 | 0.857 | 0.043 | 0.155 | 0.008 |
| February | 1.074 | 0.054 | 0.808 | 0.041 | 0.155 | 0.008 |
| March | 1.003 | 0.051 | 0.725 | 0.037 | 0.155 | 0.008 |

| | M12-X Easterly Kirkwall to Parkway (TCPL) | | M12-X Easterly Kirkwall to Lisgar, Parkway (Consumers) | | M12-X Westerly Parkway to Kirkwall, Dawn | |
|---|---|---|---|---|---|---|
| Month | Fuel Ratio (%) | Fuel Rate ($/GJ) | Fuel Ratio (%) | Fuel Rate ($/GJ) | Fuel Ratio (%) | Fuel Rate ($/GJ) |
| April | 0.468 | 0.024 | 0.155 | 0.008 | 0.289 | 0.015 |
| May | 0.393 | 0.020 | 0.155 | 0.008 | 0.289 | 0.015 |
| June | 0.389 | 0.020 | 0.155 | 0.008 | 0.289 | 0.015 |
| July | 0.387 | 0.019 | 0.155 | 0.008 | 0.289 | 0.015 |
| August | 0.386 | 0.019 | 0.155 | 0.008 | 0.289 | 0.015 |
| September | 0.383 | 0.019 | 0.155 | 0.008 | 0.289 | 0.015 |
| October | 0.427 | 0.021 | 0.155 | 0.008 | 0.289 | 0.015 |
| November | 0.412 | 0.021 | 0.155 | 0.008 | 0.155 | 0.008 |
| December | 0.414 | 0.021 | 0.155 | 0.008 | 0.155 | 0.008 |
| January | 0.428 | 0.022 | 0.155 | 0.008 | 0.155 | 0.008 |
| February | 0.420 | 0.021 | 0.155 | 0.008 | 0.155 | 0.008 |
| March | 0.433 | 0.022 | 0.155 | 0.008 | 0.155 | 0.008 |

**Exhibit A**
**To**
**Firm Transportation Agreement No. FT1-NUI-0122**
**Under Rate Schedule FT-1**
**Between**
**Vector Pipeline L.P. and Northern Utilities, Inc.**

| | |
|---|---|
| Primary Term | 05/01/2006 - 03/31/2016 |
| Contracted Capacity: | 6,070 Dth/day |
| Primary Receipt Points: | Alliance Interconnect |
| Primary Delivery Points: | St. Clair (US) Interconnect |
| Rate Election Recourse: | |

The Reservation Charge applicable to this service is $\boxed{\text{\$8.0908/Dth/month}}$ ($0.2660 per Dth on a 100% load factor basis), exclusive of fuel reimbursement, Annual Charge Adjustment ("ACA") and any other future surcharges. Secondary points within the primary path and out of path secondary backhauls are subject to the same rate as the primary path.

STATEMENT OF RATES AND CHARGES

All rates are stated in U.S. $

**Rate Schedule FT-1**

Recourse Rates:

| | Zone 1 2/ Maximum | Minimum | Zone 2 2/ Maximum | Minimum |
|---|---|---|---|---|
| Reservation Charge ($ per Dth per month) | $1.2501 | 0.0000 | $\boxed{\$7.7745}$ | 0.0000 |
| Usage Charge ($ per Dth) 1/ | 0.0000 | 0.0000 | $\boxed{0.0000}$ | 0.0000 |

Negotiated Rates:

The effective maximum negotiated charge for any negotiated rate transportation agreement is the charge agreed to by the parties, as set forth in the attached Tariff sheets.

**Rate Schedule FT-L**

Recourse Rates:

| | Zone 1 2/ Maximum | Minimum | Zone 2 2/ Maximum | Minimum |
|---|---|---|---|---|
| Reservation Charge ($ per Dth per month) | $0.8391 | 0.0000 | $5.2182 | 0.0000 |
| Usage Charge ($ per Dth) 1/ | 0.0135 | 0.0000 | 0.0840 | 0.0000 |

Negotiated Rates:

The effective maximum negotiated charge for any negotiated rate transportation agreement is the charge agreed to by the parties, as set forth in the attached Tariff sheets.

**Exhibit A
To
FT-1 Firm Transportation Agreement No. FT1-NUI-C0122
Under Toll Schedule FT-1
Between
Vector Pipeline Limited Partnership and Northern Utilities, Inc.**

| | |
|---|---|
| Primary Term: | 05/01/2006 – 03/31/2016 |
| Contracted Capacity: | 6,404 GJ/d |
| Primary Receipt Points: | St. Clair (Canada) Interconnect |
| Primary Delivery Points: | Dawn Interconnect |

Toll Election Negotiated:
The Reservation Charge applicable to this service is $\boxed{\$0.4623/GJ/month}$ ($0.0152 per GJ on a 100% load factor basis). Secondary points within the primary path and out of secondary from Dawn Interconnect to St. Clair (Canada) Interconnect are subject to the same rate as the primary path.

# CAPACITY RELEASE TRANSACTIONS CONFIRMATION LETTER

1. Replacement Shipper's Name: Northern Utilities, Inc.

2. a. Master Service Agreement for Capacity Release Agreement No.: CRT-NUI-0079
   b. Underlying Rate Schedule No.: FT-1

3. Replacement Shipper's Firm Transportation Agreement No.: **CRL-NUI-0725**
   Temporary Assignment of Canadian portion Agreement No.: **CRL-NUI-C0725**

4. Releasing Shipper's Firm Transportation Agreement No.: FT1-DTE-0425

5. Commencement Date: **04/01/2008**
   Termination Date: **10/31/2017**

6. Reservation Quantity: **17,172 Dth/d**

7. Primary Receipt Point(s):

| | Maximum Daily Reservation Quantity Dth |
|---|---|
| **Alliance Interconnect** | **17,172** |

8. Primary Delivery Point(s):

| | Maximum Daily Reservation Quantity Dth |
|---|---|
| **St. Clair (US) Interconnect** | **17,172** |

9. Reservation Rate: $\boxed{\$7.6042/Dth}$ ($0.2500 per Dth on a 100% load factor basis), exclusive of ACA and fuel reimbursement.

10. Usage Rate: $0.00/Dth

11. Special Terms and Conditions of Release (if any):

Replacement shipper will receive corresponding Vector-Canada capacity from St. Clair (International Border) to Dawn at no additional cost.

The Term of the FT1-DTE-0425 contract underlying this release is subject to the June 30, 2005 Precedent Agreement between DTE Energy Trading, Inc. and Vector Pipeline L.P.

Authorized Signature of Replacement Shipper: DTe

Name: DON TULLHENSKY

Title: ANALYST

Telephone: (508) 836-7259

Fax: ( ) 508-870-2294

# CAPACITY RELEASE TRANSACTIONS
# CONFIRMATION LETTER

1. Replacement Shipper's Name: Northern Utilities, Inc.

2. a. Master Service Agreement for Capacity Release Agreement No.: CRT-NUI-0079
   b. Underlying Rate Schedule No.: FT-1

3. Replacement Shipper's Firm Transportation Agreement No.: **CRL-NUI-0727**
   Temporary Assignment of Canadian portion Agreement No.: **CRL-NUI-C0727**

4. Releasing Shipper's Firm Transportation Agreement No.: FT1-DTE-0426

5. Commencement Date: **11/01/2008** Winter Only (November 1 thru March 31 on an annual basis)
   Termination Date: **03/31/2017**

6. Reservation Quantity: **17,086 Dth/d**

7. Primary Receipt Point(s): Maximum Daily Reservation Quantity Dth

   **Washington 10 Interconnect** **17,086**

8. Primary Delivery Point(s): Maximum Daily Reservation Quantity Dth

   **St. Clair (US) Interconnect** **17,086**

9. Reservation Rate: $4.5625/Dth ($0.1500 per Dth on a 100% load factor basis), exclusive of ACA and fuel reimbursement.

10. Usage Rate: $0.00/Dth

11. Special Terms and Conditions of Release (if any):

    Replacement shipper will receive corresponding Vector-Canada capacity from St. Clair (International Border) to Dawn at no additional cost.

    The Term of the FT1-DTE-0425 contract underlying this release is subject to the June 30, 2005 Precedent Agreement between DTE Energy Trading, Inc. and Vector Pipeline L.P.

Authorized Signature of Replacement Shipper: DTC

Name: DON JULCHINSKY

Title: ANALYST

Telephone: (___) 508-836 7257

Fax: (___) 508-870-2294

Historic TransCanada Fuel Loss Percentages

| | Jun-13 | Jul-13 | Aug-13 | Sep-13 | Oct-13 | Nov-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Winter Fuel Average | Summer Fuel Average | Last 12 Months |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Union Parkway Belt - Iroquois | 0.92% | 0.20% | 0.25% | 0.19% | 0.61% | 0.38% | 1.18% | 0.88% | 1.69% | 1.35% | 0.84% | 0.72% | 1.10% | 0.53% | 0.77% |
| Union Dawn - East Hereford | 0.65% | 0.66% | 0.46% | 0.24% | 1.00% | 1.13% | 2.20% | 2.11% | 2.96% | 2.35% | 1.85% | 1.64% | 2.15% | 0.93% | 1.44% |

Historic Fuel Retention Ratios

| Pipeline | Receipt | Delivery | Jun-13 | Jul-13 | Aug-13 | Sep-13 | Oct-13 | Nov-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Winter | Summer | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vector | Alliance | W-10 | 1.05% | 1.20% | 1.65% | 1.41% | 1.47% | 1.51% | 0.90% | 1.08% | 0.44% | 0.45% | 0.89% | 0.75% | 0.88% | 1.20% | 1.07% |
| Vector | Alliance | Dawn | 1.05% | 1.20% | 1.65% | 1.41% | 1.47% | 1.51% | 0.90% | 1.08% | 0.44% | 0.45% | 0.89% | 0.75% | 0.88% | 1.20% | 1.07% |
| Vector | W-10 Storage | Dawn | 0.40% | 0.40% | 0.55% | 0.47% | 0.49% | 0.55% | 0.34% | 0.47% | 0.15% | 0.15% | 0.30% | 0.25% | 0.33% | 0.41% | 0.38% |

Attention: Vice-President, Washington 10 Storage Corporation
Telephone: (313) 235-6445
Fax: (313) 235-6450

**SHIPPER:**

NORTHERN UTILITIES, INC.
300 Friberg Parkway
Westborough, MA 01581-5039

**INVOICES, STATEMENTS AND NOMINATIONS**

Stacy Djucik
1500 – 165th Street
Hammond, IN 46324
Telephone: (219) 853-4320

**ALL OTHER MATTERS**

F. Chico DaFonte
Telephone: (508) 836-7253
Facsimile: (508) 870-2294
Email: fdafonte@nisource.com

## ARTICLE VIII: FURTHER AGREEMENT

Article II is amended to add the following sentence at the end of the first paragraph:

The Monthly Deliverability Rate and Monthly Capacity Rate shall be paid in the form of a monthly demand charge of $240,833.34 (assuming a typical 12 month, April through March storage cycle). The parties agree that Transporter may, from time to time, modify the Monthly Deliverability Rate and the Monthly Capacity Rate set forth in Exhibit I, so long as the amounts set forth on the revised Exhibit I do not exceed Shipper's monthly demand charge of $240,833.34. Unless otherwise specified, the revised Exhibit I will be effective the first day of the month immediately following the date that Transporter provides a copy of the revised Exhibit I to Shipper.

# EXHIBIT I

## Rates:

Monthly Deliverability Rate: $ 2.4754 per Dth

Monthly Capacity Rate: $ 0.0238 per Dth

Injection Rate: $ 0.00 per Dth

Withdrawal Rate: $ 0.00 per Dth

Authorized Overrun Rate: $ 0.05 per Dth

Interruptible Rate: $ 0.05 per Dth

## Service Parameters:

Maximum Storage Quantity (MSQ): 3,400,000 Dth

Maximum Daily Injection Quantity (MDIQ):

| Inventory | MDIQ |
|---|---|
| | |
| April 1 through October 31 | 17,000 Dth/d Firm |
| | |
| November 1 through March 31 | 17,000 Dth/d Interruptible |

Maximum Daily Withdrawal Quantity (MDWQ):

| Inventory | MDWQ |
|---|---|
| | |
| November 1 through November 30 | 64,600 Dth/d Firm |
| December 1 through March 31 | |
| Inventory ≥ 680,000 Dth | 34,000 Dth/d Firm |
| Inventory ≥ 340,000 Dth and < 680,000 Dth | 22,780 Dth/d Firm |
| Inventory ≥ 0 Dth and < 340,000 Dth | 13,600 Dth/d Firm |
| | |
| April 1 through October 31 | 34,000Dth/d Interruptible |

Primary Receipt Point(s): W-10 / Vector Interconnect

Secondary Receipt Point(s): W-10 / MichCon Interconnect

Primary Delivery Point(s): W-10 / Vector Interconnect

Secondary Delivery Point(s): W-10 / MichCon Interconnect

DTE Energy

Gas Midstream Services



## DTE Gas Storage - Critical Notices

**Fuel Rates Effective April 1, 2015 (March 20, 2015)**

The fuel rate for Injections will be reduced from 0.90% to **0.70%** for the upcoming injection season beginning April 1, 2015.

The fuel rates for Withdrawals and Wheels-from-Hub will remain unchanged.

Injections: 0.70%
Withdrawals: 0.00%
Wheel-from-hub to DTEGas 0.00%
Wheel-from-hub to Vector 0.50%

As always, we welcome your feedback. Please contact us with your questions or concerns.

Steve Richman (313.235.4275)
Mike Romain (313.235.4213)
Sandy Schmidt (313.235.1148)

Less

**Fuel Rates Effective November 1, 2014 (October 20, 2014)**

Due to historical low inventory levels in March unprecedented injections were seen this summer and the station operated much more efficiently than anticipated. As a result, the fuel rate for Withdrawals will be reduced from 0.3% to **0.0%** for the upcoming withdrawal season only beginning November 1, 2014.

The fuel rates for Injections and Wheels-from-Hub will remain unchanged.

Injections: 0.9%
Withdrawals: 0.0%
Wheel-from-hub to DTEGas 0.0%
Wheel-from-hub to Vector 0.5%

As always, we welcome your feedback. Please contact us with your questions or concerns.

Steve Richman (313.235.4275)
Mike Romain (313.235.4213)
Sandy Schmidt (313.235.1148)

Less

**Restriction on Authorized Withdrawal Overrun (January 17, 2014)**

Washington 10 Storage will not be authorizing any Overrun Withdrawal service for the period Monday, January 20, 2014 through Wednesday, January 22, 2014 and until further notice.

More

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

FY 2015 GAS ANNUAL CHARGES
CORRECTION FOR ANNUAL CHARGES UNIT CHARGE
June 25, 2015

The annual charges unit charge (ACA) to be applied to in fiscal year 2016 for recovery of FY 2015 Current year and 2014 True-Up is **$0.0014** per Dekatherm (Dth). The new ACA surcharge will become effective October 1, 2015.

The following calculations were used to determine the FY 2015 unit charge:

**2015 CURRENT**:

| | | |
|---|---|---|
| Estimated Program Cost $61,912,000 divided by 44,605,342,976 Dth | = | 0.0013879952 |

**2014 TRUE-UP**:

| | | |
|---|---|---|
| Debit/Credit Cost ($643,382) divided by 42,469,337,988 Dth | = | (0.0000151493) |
| **TOTAL UNIT CHARGE** | = | 0.0013728458 |

If you have any questions, please contact Norman Richardson at (202)502-6219 or e-mail at Norman.Richardson@ferc.gov.

| Northern Utilities, Inc.<br>Retail Marketer Capacity Assignment Revenue Projections<br>November 2015 through October 2016 | | |
|---|---|---|
| Item | Revenue | Reference |
| NH Division Pipeline Contract Capacity Assignment | $ (2,680,014) | Page 2 |
| NH Division Storage Contract Capacity Assignment | $ (250,046) | Page 3 |
| NH Division Peaking Demand | $ (533,690) | Page 4 |
| NH Division Asset Management and Capacity Release Revenue Assigned to Retail Suppliers | $ 591,775 | Page 5 |
| NH Division PNGTS Litigation Costs Assigned to Retail Suppliers | $ (71) | Page 6 |
| NH Division Capacity Assignment Demand Revenue (excluding PNGTS Refund) | $ (2,872,046) | Sum of Items Above |
| NH Division PNGTS Refund Assigned to Retail Suppliers | $ 182,564 | Page 6 |
| NH Division Capacity Assignment Demand Revenue (including PNGTS Refund) | $ (2,689,481) | Sum of Items Above |

Northern Utilities, Inc.
New Hampshire Division Pipeline Capacity Assignment Estimates
November 2015 through October 2016

| Pipeline | Contract ID | Pipeline Allocated Cost | Storage Allocated Cost | Capacity Assigned? (Y/N) | Pipeline Allocated MDQ | Storage Allocated MDQ | Assigned Pipeline MDQ | Assigned Storage MDQ | Assigned Pipeline Credits | Assigned Storage Credits | NH Annual Cap Assign Credit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Algonquin | 93002F | $ 308,943 | $ - | Y | 4,211 | - | (357) | - | $ (26,192) | $ - | $ (26,192) |
| Algonquin | 93201A1C | $ 98,680 | $ - | Y | 1,251 | - | (106) | - | $ (8,361) | $ - | $ (8,361) |
| Granite | 16-100-FT-NN | $ 965,080 | $ 875,484 | Y | 39,165 | 35,529 | (3,324) | (2,932) | $ (81,908) | $ (72,249) | $ (154,157) |
| Granite | 16-100-FT-NN | $ 482,540 | $ 437,742 | Y | 39,165 | 35,529 | (3,324) | (2,932) | $ (40,954) | $ (36,124) | $ (77,078) |
| Granite | 16-100-FT-NN | $ 503,407 | $ 456,672 | Y | 39,165 | 35,529 | (3,324) | (2,932) | $ (42,725) | $ (37,686) | $ (80,411) |
| Iroquois | R181001 | $ 520,036 | $ - | Y | 6,569 | - | (557) | - | $ (44,095) | $ - | $ (44,095) |
| PNGTS | 1997-003 | $ 342,993 | $ - | Y | 1,100 | - | (93) | - | $ (28,998) | $ - | $ (28,998) |
| PNGTS | 1997-004 | $ - | $ 8,146,067 | Y | - | 33,000 | - | (2,723) | $ - | $ (672,174) | $ (672,174) |
| Tennessee | 5083 | $ 1,284,032 | $ - | Y | 4,605 | - | (391) | - | $ (109,024) | $ - | $ (109,024) |
| Tennessee | 5083 | $ 2,116,443 | $ - | Y | 8,550 | - | (726) | - | $ (179,712) | $ - | $ (179,712) |
| Tennessee | 5265 | $ - | $ 259,998 | Y | - | 2,653 | - | (219) | $ - | $ (21,462) | $ (21,462) |
| Tennessee | 5292 | $ 121,067 | $ - | Y | 1,406 | - | (119) | - | $ (10,247) | $ - | $ (10,247) |
| Tennessee | 31861 | $ 191,675 | $ - | Y | 2,226 | - | (189) | - | $ (16,274) | $ - | $ (16,274) |
| Tennessee | 39735 | $ 79,994 | $ - | Y | 929 | - | (79) | - | $ (6,802) | $ - | $ (6,802) |
| Tennessee | 41099 | $ 367,419 | $ - | Y | 4,267 | - | (362) | - | $ (31,171) | $ - | $ (31,171) |
| Texas Eastern | 800384 | $ 64,987 | $ - | N | NA | NA | - | - | $ - | $ - | $ - |
| TransCanada | 33322 | $ - | $ 10,995,763 | Y | - | 34,000 | - | (2,806) | $ - | $ (907,474) | $ (907,474) |
| TransCanada | 29594 | $ 956,387 | $ - | Y | 5,937 | - | (504) | - | $ (81,189) | $ - | $ (81,189) |
| Union | M12205 | $ 156,743 | $ - | Y | 6,003 | - | (509) | - | $ (13,290) | $ - | $ (13,290) |
| Vector | CRL-NUI-0725 | $ - | $ 1,566,952 | Y | - | 17,172 | - | (1,417) | $ - | $ (129,302) | $ (129,302) |
| Vector | CRL-NUI-0727 | $ - | $ 389,774 | Y | - | 17,086 | - | (1,410) | $ - | $ (32,166) | $ (32,166) |
| Vector | FT-1-NUI-0122 | $ 566,295 | $ - | Y | 6,070 | - | (515) | - | $ (48,046) | $ - | $ (48,046) |
| Vector | FT-1-NUI-C0122 | $ 28,138 | $ - | Y | 6,070 | - | (515) | - | $ (2,387) | $ - | $ (2,387) |
| Total NH Capacity Assignment Credits | | | | | | | | | $ (771,377) | $ (1,908,637) | $ (2,680,014) |

Northern Utilities, Inc.
New Hampshire Division Storage Contract Capacity Assignment Estimates
November 2015 through October 2016

| Vendor | Contract ID | Annual Fixed Charges | Capacity Assigned (Y/N) | Company Managed (Y/N) | Assigned MSQ | Assigned MDWQ | NH Annual Cap Assign Credit |
|---|---|---|---|---|---|---|---|
| Tennessee | 5195 | $ 139,855 | Y | N | (21,402) | (350) | $ (11,542) |
| W-10 | 01052 | $ 2,890,000 | Y | Y | (280,593) | (2,806) | $ (238,504) |

Total NH Division Storage Capacity Assignment $ (250,046)

MSQ = Maximum Space Quantity
MDWQ = Maximum Daily Withdrawal Quantity

Northern Utilities, Inc.
New Hampshire Division
Peaking Demand Capacity Assignment Revenues
November 2015 through October 2016

| Month | Total Peaking Demand TCQ | Rate | Demand Revenue |
|---|---|---|---|
| Nov-15 | 3,801 | $ 23.40 | $ (88,948) |
| Dec-15 | 3,801 | $ 23.40 | $ (88,948) |
| Jan-16 | 3,801 | $ 23.40 | $ (88,948) |
| Feb-16 | 3,801 | $ 23.40 | $ (88,948) |
| Mar-16 | 3,801 | $ 23.40 | $ (88,948) |
| Apr-16 | 3,801 | $ 23.40 | $ (88,948) |

Total Division Peaking Demand Revenue $ (533,690)

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Northern Utilities, Inc.

New Hampshire Division

Asset Management and Capacity Release Revenue Assigned to Retail Suppliers

November 2015 through October 2016

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| Asset Management Agreeement Revenue | | | | | |
|---|---|---|---|---|---|
| Resources | Projected Value | Company-Managed Resources | Resource Type | Percentage Capacity Assigned | Annual Value to NH Retail Marketers |
| Chicago via Vector, TCPL, Iroquois, TGP, Algonquin | [redacted] | Yes | Pipeline | 8.49% | [redacted] |
| Wash 10 via Vector, TCPL, PNGTS | | Yes | Storage | 8.49% | |
| AGT K#93201A1C | | Yes | Pipeline | 8.25% | |
| Tennessee Niagara | | No | Pipeline | 8.49% | |
| Tennessee Long-Haul | | No | Pipeline | 8.49% | |
| Total Asset Management | $ (9,565,000) | | | | $ 591,775 |

| Capacity Release Revenue | | | | | |
|---|---|---|---|---|---|
| Resources | Annual Value | Company-Managed Resources | Resource Type | Percentage Capacity Assigned | Annual Value to NH Retail Marketers |
| Texas Eastern Contract 800384 | $ (64,987) | No | Pipeline | 8.49% | $ - |
| Total Capacity Release | $ (64,987) | | | | $ - |

| | | |
|---|---|---|
| Total Asset Management and Capacity Release Revenue | $ (9,629,987) | $ 591,775 |

Northern Utilities, Inc.
New Hampshire Division
PNGTS 2008 Rate Case Refund and Rate Case Litigation Costs Assigned to Retail Suppliers
November 2015 through October 2016

| | |
|---|---|
| PNGTS Litigation Costs | $ 2,018 |

| PNGTS Contract | MDQ | Percentage MDQ | Allocated PNGTS Litigation Items | Resource Type | Percentage Capacity Assigned | Capacity Assignment Revenue |
|---|---|---|---|---|---|---|
| PNGTS Contract 1997-003 | 1,100 | 3% | $ 65 | Pipeline | 3.60% | $ (2) |
| PNGTS Contract 1997-004 | 33,000 | 97% | $ 1,953 | Storage | 3.50% | $ (68) |
| PNGTS Total | 34,100 | 100% | $ 2,018 | | | $ (71) |

| | |
|---|---|
| 50% NH Allocated PNGTS Refund | $ (5,210,155) |

| PNGTS Contract | MDQ | Percentage MDQ | Allocated PNGTS Litigation Items | Resource Type | Percentage Credit Allocated | Capacity Assignment Revenue |
|---|---|---|---|---|---|---|
| PNGTS Contract 1997-003 | 1,100 | 3% | $ (168,070) | Pipeline | 3.60% | $ 6,050 |
| PNGTS Contract 1997-004 | 33,000 | 97% | $ (5,042,085) | Storage | 3.50% | $ 176,514 |
| PNGTS Total | 34,100 | 100% | $ (5,210,155) | | | $ 182,564 |

| | |
|---|---|
| Estimated Net Refund to NH Sales Service Customers | $ (5,027,591) |

Northern Utilities, Inc.
NH Division Peaking Capacity Assignment Demand Rate
November 2015 through April 2016

| Line | Description | Northern | NH Division |
|---|---|---|---|
| 1 | Capacity Allocation Factor | | 42.42% |
| 2 | Peaking Contracts | 41,879 | 17,765 |
| 3 | Peaking Plants | 4,181 | 1,774 |
| 4 | Total | 46,060 | 19,539 |
| 5 | Peaking Contracts Costs | $ 4,223,000 | $ 1,791,397 |
| 6 | Peaking Allocated Pipeline Demand Costs | $ 1,252,642 | $ 531,371 |
| 7 | Peaking Plants | | $ 420,658 |
| 8 | Capacity Costs (Before Cap Assignment) | | $ 2,743,425 |
| 9 | NH Division Peaking Capacity Assignment Rate | | $ 23.40 |

# Schedules 6A and 6B

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**Northern Utilities, Inc.**
**Commodity Cost by Supply Source**
**November 2015 through April 2016**

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Season |
|---|---|---|---|---|---|---|---|
| **Pipeline Supplies** | | | | | | | |
| Tenn Zone 4 Spot | [redacted] | | | | | | |
| Tennessee Production | | | | | | | |
| Chicago | | | | | | | |
| Algonquin Receipts | | | | | | | |
| TGP Zone 6 | | | | | | | |
| Niagara | | | | | | | |
| Iroquois Receipts | | | | | | | |
| PNGTS Receipts | | | | | | | |
| PNGTS Delivered | | | | | | | |
| PNGTS Delivered (Dec - Feb) | | | | | | | |
| Maritimes Delivered | | | | | | | |
| Total Pipeline | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Company Managed Pipeline | $ (52,103) | $ (63,039) | $ (81,835) | $ (74,036) | $ (59,291) | $ - | $ (330,303) |
| Net Pipeline | $ (52,103) | $ (63,039) | $ (81,835) | $ (74,036) | $ (59,291) | $ - | $ (330,303) |
| **Underground Storage** | | | | | | | |
| Tennessee Storage | $ - | $ - | $ 116,815 | $ 128,854 | $ 137,384 | $ - | $ 383,052 |
| Washington 10 Storage | $ 36,672 | $ 1,845,222 | $ 2,496,447 | $ 2,381,170 | $ 691,508 | $ - | $ 7,451,019 |
| Total Storage | $ 36,672 | $ 1,845,222 | $ 2,613,262 | $ 2,510,023 | $ 828,892 | $ - | $ 7,834,071 |
| Company Managed Storage | $ - | $ (715,311) | $ (715,311) | $ (691,468) | $ (262,281) | $ - | $ (2,384,371) |
| Net Storage | $ 36,672 | $ 1,129,911 | $ 1,897,950 | $ 1,818,556 | $ 566,612 | $ - | $ 5,449,700 |
| **Peaking Supplies** | | | | | | | |
| Peaking Contract 1 | [redacted] | | | | | | |
| Peaking Contract 2 | | | | | | | |
| Peaking Contract 3 | | | | | | | |
| Peaking Contract 4 | | | | | | | |
| LNG | | | | | | | |
| Total Peaking | $ 22,369 | $ 22,727 | $ 4,716,255 | $ 357,034 | $ 104,416 | $ 24,771 | $ 5,247,573 |
| Company Managed Peaking | $ - | $ - | $ (2,162,022) | $ (778,882) | $ - | $ - | $ (2,940,904) |
| Net Peaking | $ 22,369 | $ 22,727 | $ 2,554,233 | $ (421,848) | $ 104,416 | $ 24,771 | $ 2,306,669 |
| Total NUI Commodity | $ 59,041 | $ 1,867,949 | $ 7,329,517 | $ 2,867,057 | $ 933,309 | $ 24,771 | $ 13,081,644 |
| Company-Managed (NH & ME) | $ (52,103) | $ (778,350) | $ (2,959,168) | $ (1,544,385) | $ (321,572) | $ - | $ (5,655,578) |
| Sales Service (NH & ME) | $ 6,939 | $ 1,089,599 | $ 4,370,348 | $ 1,322,672 | $ 611,737 | $ 24,771 | $ 7,426,066 |
| **Net Sales Service** | $ 6,939 | $ 1,089,599 | $ 4,370,348 | $ 1,322,672 | $ 611,737 | $ 24,771 | $ 7,426,066 |

**Northern Utilities, Inc.**
**Commodity Volumes by Supply Source (Dth)**
**November 2015 through April 2016**

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Season |
|---|---|---|---|---|---|---|---|
| **Pipeline Supplies** | | | | | | | |
| Tenn Zone 4 Spot | 72,768 | 75,194 | 11,423 | 0 | 194 | 72,768 | 232,348 |
| Tennessee Production | 302,527 | 369,560 | 369,560 | 345,717 | 368,973 | 344,042 | 2,100,379 |
| Chicago | 174,977 | 180,930 | 180,930 | 169,257 | 180,930 | 0 | 887,024 |
| Algonquin Receipts | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | 0 | 190,152 |
| TGP Zone 6 | 0 | 0 | 0 | 0 | 0 | 136,212 | 136,212 |
| Niagara | 63,481 | 65,597 | 65,597 | 61,364 | 65,597 | 53,714 | 375,348 |
| Iroquois Receipts | 18,325 | 18,948 | 18,948 | 17,725 | 18,948 | 0 | 92,894 |
| PNGTS Receipts | 23,916 | 24,713 | 24,713 | 23,119 | 24,713 | 29,895 | 151,069 |
| PNGTS Delivered | 149,475 | 154,458 | 154,458 | 144,493 | 154,458 | 80,717 | 838,057 |
| PNGTS Delivered | 0 | 77,229 | 77,229 | 72,246 | 0 | 0 | 226,704 |
| Maritimes Delivered | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| Total Pipeline | 1,067,999 | 1,237,908 | 1,174,138 | 1,087,701 | 1,085,093 | 777,347 | 6,430,186 |
| Company Managed Pipeline | -17,490 | -18,073 | -18,073 | -16,907 | -17,490 | 0 | -88,033 |
| Net Pipeline | 1,050,509 | 1,219,835 | 1,156,065 | 1,070,794 | 1,067,603 | 777,347 | 6,342,153 |
| **Underground Storage** | | | | | | | |
| Tennessee Storage | 0 | 0 | 63,771 | 70,343 | 74,999 | 0 | 209,113 |
| Washington 10 Storage | 11,091 | 558,046 | 754,995 | 720,132 | 209,131 | 0 | 2,253,395 |
| Total Storage | 11,091 | 558,046 | 818,765 | 790,474 | 284,131 | 0 | 2,462,507 |
| Company Managed Storage | 0 | -216,330 | -216,330 | -209,119 | -79,321 | 0 | -721,100 |
| Net Storage | 11,091 | 341,716 | 602,435 | 581,355 | 204,810 | 0 | 1,741,407 |
| **Peaking Supplies** | | | | | | | |
| Peaking Contract 1 | 0 | 0 | 12,636 | 0 | 0 | 0 | 12,636 |
| Peaking Contract 2 | 0 | 0 | 88,658 | 0 | 0 | 0 | 88,658 |
| Peaking Contract 3 | 0 | 0 | 52,332 | 0 | 0 | 0 | 52,332 |
| Peaking Contract 4 | 0 | 0 | 176,349 | 50,853 | 11,958 | 0 | 239,160 |
| LNG | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| Total Peaking | 2,132 | 2,203 | 369,522 | 52,914 | 14,161 | 2,130 | 443,063 |
| Company Managed Peaking | 0 | 0 | -133,420 | -48,059 | 0 | 0 | -181,479 |
| Net Peaking | 2,132 | 2,203 | 236,102 | 4,855 | 14,161 | 2,130 | 261,584 |
| Total NUI Commodity | 1,081,222 | 1,798,158 | 2,362,425 | 1,931,089 | 1,383,385 | 779,477 | 9,335,756 |
| Company-Managed (NH & ME) | -17,490 | -234,403 | -367,823 | -274,085 | -96,811 | 0 | -990,612 |
| Sales Service (NH & ME) | 1,063,732 | 1,563,755 | 1,994,602 | 1,657,004 | 1,286,574 | 779,477 | 8,345,144 |
| **Net Sales Service** | 1,063,732 | 1,563,755 | 1,994,602 | 1,657,004 | 1,286,574 | 779,477 | 8,345,144 |

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**Northern Utilities, Inc.**
**Commodity Volumes by Supply Source (Dth)**
**November 2015 through April 2016**

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Season |
|---|---|---|---|---|---|---|---|
| **Pipeline Supplies** | | | | | | | |
| Tenn Zone 4 Spot | [redacted] | | | | | | |
| Tennessee Production | | | | | | | |
| Chicago | | | | | | | |
| Algonquin Receipts | | | | | | | |
| TGP Zone 6 | | | | | | | |
| Niagara | | | | | | | |
| Iroquois Receipts | | | | | | | |
| PNGTS Receipts | | | | | | | |
| PNGTS Delivered | | | | | | | |
| PNGTS Delivered | | | | | | | |
| Maritimes Delivered | | | | | | | |
| Total Pipeline | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Company Managed Pipeline | $ 2.979 | $ 3.488 | $ 4.528 | $ 4.379 | $ 3.390 | | $ 3.752 |
| Net Pipeline | $ (0.050) | $ (0.052) | $ (0.071) | $ (0.069) | $ (0.056) | $ - | $ (0.052) |
| **Underground Storage** | | | | | | | |
| Tennessee Storage | | | $ 1.832 | $ 1.832 | $ 1.832 | | $ 1.832 |
| Washington 10 Storage | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | | $ 3.307 |
| Total Storage | $ 3.307 | $ 3.307 | $ 3.192 | $ 3.175 | $ 2.917 | | $ 3.181 |
| Company Managed Storage | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | | $ 3.307 |
| Net Storage | $ 3.307 | $ 3.307 | $ 3.150 | $ 3.128 | $ 2.767 | | $ 3.129 |
| **Peaking Supplies** | | | | | | | |
| Peaking Contract 1 | [redacted] | | | | | | |
| Peaking Contract 2 | | | | | | | |
| Peaking Contract 3 | | | | | | | |
| Peaking Contract 4 | | | | | | | |
| LNG | | | | | | | |
| Total Peaking | $ 10.491 | $ 10.315 | $ 12.763 | $ 6.747 | $ 7.373 | $ 11.630 | $ 11.844 |
| Company Managed Peaking | | | $ 16.205 | $ 16.207 | | | $ 16.205 |
| Net Peaking | $ 10.491 | $ 10.315 | $ 10.818 | $ (86.891) | $ 7.373 | $ 11.630 | $ 8.818 |
| Total NUI Commodity | $ 0.055 | $ 1.039 | $ 3.103 | $ 1.485 | $ 0.675 | $ 0.032 | $ 1.401 |
| Company-Managed (NH & ME) | $ 2.979 | $ 3.321 | $ 8.045 | $ 5.635 | $ 3.322 | | $ 5.709 |
| Sales Service (NH & ME) | $ 0.007 | $ 0.697 | $ 2.191 | $ 0.798 | $ 0.475 | $ 0.032 | $ 0.890 |
| **Net Sales Service** | $ 0.007 | $ 0.697 | $ 2.191 | $ 0.798 | $ 0.475 | $ 0.032 | $ 0.890 |

# REDACTED



Source of Supply: Tennessee Zone 4
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 73,672 | 76,128 | 11,565 | - | 197 | 73,672 | 235,234 |
| 2 | City Gate Delivered Volume | Line 37 | 72,768 | 75,194 | 11,423 | - | 194 | 72,768 | 232,348 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Sum Lines 29 and 39 | $ 8,887 | $ 9,183 | $ 1,395 | $ - | $ 24 | $ 8,887 | $ 28,375 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | [redacted] | | | | | | |
| 7 | | | | | | | | | |
| 8 | Tennessee Zone 4 Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 73,672 | 76,128 | 11,565 | - | 197 | 73,672 | 235,234 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.034 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 215,123 | $ 236,758 | $ 37,240 | $ - | $ 626 | $ 223,963 | $ 713,709 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 11 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | [redacted] | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | [redacted] | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | [redacted] | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 2 | | | | | | | | |
| 19 | Tennessee Gas Pipeline (Contract 5265) | | | | | | | | |
| 20 | Receipt Point: Tennessee FS-MA 300 Leg | | | | | | | | |
| 21 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 22 | Total Contract Recevied Volume | Sendout Optimization | 73,672 | 76,128 | 76,128 | 71,216 | 76,128 | 73,672 | 446,944 |
| 23 | Received Volume | Line 9 | 73,672 | 76,128 | 11,565 | - | 197 | | 235,234 |
| 24 | Percentage Allocated | Line 23 divided by Line 22 | 100.00% | 100.00% | 15.19% | 0.00% | 0.26% | 100.00% | 52.63% |
| 25 | Received Volume | Line 9 | 73,672 | 76,128 | 11,565 | - | 197 | 73,672 | 235,234 |
| 26 | Fuel Loss Rate | Att to Sch 5A, Line 46 of Page 2 | 0.88% | 0.88% | 0.88% | | 0.88% | 0.88% | 0.88% |
| 27 | Delivered Volume | Line 25 times (1 - Line 26) | 73,024 | 75,458 | 11,463 | - | 195 | 73,024 | 233,164 |
| 28 | Variable Transportation Rate | Att to Sch 5A, Line 29 of Page 2 | $ 0.1203 | $ 0.1203 | $ 0.1203 | | $ 0.1203 | $ 0.1203 | $ 0.1203 |
| 29 | Variable Transportation Costs | Line 27 times Line 28 | $ 8,785 | $ 9,078 | $ 1,379 | $ - | $ 23 | $ 8,785 | $ 28,050 |
| 30 | | | | | | | | | |
| 31 | Transportation Segment 3 | | | | | | | | |
| 32 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 33 | Receipt Point: Pleasant St. | | | | | | | | |
| 34 | Delivery Point: Northern City Gates | | | | | | | | |
| 35 | Received Volume | Line 27 | 73,024 | 75,458 | 11,463 | - | 195 | 73,024 | 233,164 |
| 36 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 37 | City Gate Delivered Volume | Line 35 times (1 - Line 36) | 72,768 | 75,194 | 11,423 | - | 194 | 72,768 | 232,348 |
| 38 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 39 | Variable Transportation Costs | Line 37 times Line 38 | $ 102 | $ 105 | $ 16 | $ - | $ 0 | $ 102 | $ 325 |

# REDACTED



Source of Supply: Tennessee Production
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 2 | City Gate Volumes - Z0 | Line 2 of Page 5 | - | - | - | - | - | 18,618 | 18,618 |
| 3 | City Gate Volumes - Z1 | Line 2 of Page 6 | 154,368 | 216,462 | 216,462 | 202,496 | 215,874 | 221,712 | 1,227,374 |
| 4 | City Gate Volumes - Z4 | Line 2 of Page 7 | 148,160 | 153,098 | 153,098 | 143,221 | 153,098 | 103,712 | 854,387 |
| 5 | Total City Gate Volumes | Sum Lines 1 through 3 | 302,527 | 369,560 | 369,560 | 345,717 | 368,973 | 344,042 | 2,100,379 |
| 6 | City Gate Delivered Costs - Z0 | Line 6 of Page 5 | [redacted] | | | | | | |
| 7 | City Gate Delivered Costs - Z1 | Line 6 of Page 6 | | | | | | | |
| 8 | City Gate Delivered Costs - Z4 | Line 5 of Page 7 | | | | | | | |
| 9 | Total City Gate Delivered Costs | Sum Lines 5 through 7 | | | | | | | |
| 10 | Average Delivered Price | Line 8 divided by Line 4 | | | | | | | |

# REDACTED



Source of Supply: Tennessee Zone 4 200 Leg Pool
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 105,000 | 865,000 |
| 2 | City Gate Delivered Volume | Line 34 | 148,160 | 153,098 | 153,098 | 143,221 | 153,098 | 103,712 | 854,387 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Sum Lines 26 and 36 | $ 18,094 | $ 18,697 | $ 18,697 | $ 17,491 | $ 18,697 | $ 12,666 | $ 104,340 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | <u>Tennessee Zone 4 Supply Costs</u> | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 105,000 | 865,000 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.119 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 438,000 | $ 482,050 | $ 499,100 | $ 466,900 | $ 492,900 | $ 319,200 | $ 2,698,150 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 10 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | <u>Transportation Fuel Losses and Variable Charges</u> | | | | | | | | |
| 18 | Transportation Segment 2 | | | | | | | | |
| 19 | Tennessee Gas Pipeline (Contract 5083) | | | | | | | | |
| 20 | Receipt Point: Tennessee Zone 4 200 Leg Pool | | | | | | | | |
| 21 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 22 | Received Volume | Line 9 | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 105,000 | 865,000 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 46 of Page 2 | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% | 0.88% |
| 24 | Delivered Volume | Line 22 times (1 - Line 23) | 148,680 | 153,636 | 153,636 | 143,724 | 153,636 | 104,076 | 857,388 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 29 of Page 2 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 | $ 0.1203 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ 17,886 | $ 18,482 | $ 18,482 | $ 17,290 | $ 18,482 | $ 12,520 | $ 103,144 |
| 27 | | | | | | | | | |
| 28 | Transportation Segment 3 | | | | | | | | |
| 29 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 30 | Receipt Point: Pleasant St. | | | | | | | | |
| 31 | Delivery Point: Northern City Gates | | | | | | | | |
| 32 | Received Volume | Line 24 | 148,680 | 153,636 | 153,636 | 143,724 | 153,636 | 104,076 | 857,388 |
| 33 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 34 | City Gate Delivered Volume | Line 32 times (1 - Line 33) | 148,160 | 153,098 | 153,098 | 143,221 | 153,098 | 103,712 | 854,387 |
| 35 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 36 | Variable Transportation Costs | Line 34 times Line 35 | $ 207 | $ 214 | $ 214 | $ 201 | $ 214 | $ 145 | $ 1,196 |

# REDACTED



Source of Supply: Tennessee Zone 0
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 23 | - | - | - | - | - | 19,198 | 19,198 |
| 2 | City Gate Delivered Volume | Line 35 | - | - | - | - | - | 18,618 | 18,618 |
| 3 | Total Purchase Price | Line 15 | [redacted] | | | | | | |
| 4 | Total Purchase Cost | Line 2 times Line 3 | | | | | | | |
| 5 | Variable Transportation Costs | Sum Lines 27 and 37 | $ - | $ - | $ - | $ - | $ - | $ 6,832 | $ 6,832 |
| 6 | Total City Gate Delivered Costs | Sum Lines 4 and 5 | [redacted] | | | | | | |
| 7 | Average Delivered Price | Line 6 divided by Line 2 | | | | | | | |
| 8 | | | | | | | | | |
| 9 | Tennessee Zone 0 Supply Costs | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | - | - | - | - | - | 19,198 | 19,198 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.040 |
| 12 | NYMEX Cost | Line 9 times Line 10 | $ - | $ - | $ - | $ - | $ - | $ 58,361 | $ 58,361 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 8 of Page 1 | [redacted] | | | | | | |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 15 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 1A | | | | | | | | |
| 20 | Tennessee Gas Pipeline (Contract 5083) | | | | | | | | |
| 21 | Receipt Point: Tennessee Zone 0 | | | | | | | | |
| 22 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 23 | Received Volume | Line 10 | - | - | - | - | - | 19,198 | 19,198 |
| 24 | Fuel Loss Rate | Att to Sch 5A, Line 43 of Page 2 | | | | | | 2.68% | 2.68% |
| 25 | Delivered Volume | Line 23 times (1 - Line 24) | - | - | - | - | - | 18,683 | 18,683 |
| 26 | Variable Transportation Rate | Att to Sch 5A, Line 26 of Page 2 | | | | | | $ 0.3643 | $ 0.3643 |
| 27 | Variable Transportation Costs | Line 25 times Line 26 | $ - | $ - | $ - | $ - | $ - | $ 6,806 | $ 6,806 |
| 28 | | | | | | | | | |
| 29 | Transportation Segment 2A | | | | | | | | |
| 30 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 31 | Receipt Point: Pleasant St. | | | | | | | | |
| 32 | Delivery Point: Northern City Gates | | | | | | | | |
| 33 | Received Volume | Line 25 | - | - | - | - | - | 18,683 | 18,683 |
| 34 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 35 | City Gate Delivered Volume | Line 33 times (1 - Line 34) | - | - | - | - | - | 18,618 | 18,618 |
| 36 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 37 | Variable Transportation Costs | Line 35 times Line 36 | $ - | $ - | $ - | $ - | $ - | $ 26 | $ 26 |

# REDACTED



Source of Supply: Tennessee Zone L
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 23 | 158,654 | 222,472 | 222,472 | 208,119 | 221,869 | 227,869 | 1,261,455 |
| 2 | City Gate Delivered Volume | Line 35 | 154,368 | 216,462 | 216,462 | 202,496 | 215,874 | 221,712 | 1,227,374 |
| 3 | Total Purchase Price | Line 15 | [redacted] | | | | | | |
| 4 | Total Purchase Cost | Line 2 times Line 3 | | | | | | | |
| 5 | Variable Transportation Costs | Sum Lines 27 and 37 | $ 49,369 | $ 69,228 | $ 69,228 | $ 64,761 | $ 69,040 | $ 70,907 | $ 392,532 |
| 6 | Total City Gate Delivered Costs | Sum Lines 4 and 5 | [redacted] | | | | | | |
| 7 | Average Delivered Price | Line 6 divided by Line 2 | | | | | | | |
| 8 | | | | | | | | | |
| 9 | Tennessee Zone L Supply Costs | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | 158,654 | 222,472 | 222,472 | 208,119 | 221,869 | 227,869 | 1,261,455 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.123 |
| 12 | NYMEX Cost | Line 9 times Line 10 | $ 463,270 | $ 691,889 | $ 716,361 | $ 670,144 | $ 705,542 | $ 692,721 | $ 3,939,926 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 9 of Page 1 | [redacted] | | | | | | |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 15 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 1B | | | | | | | | |
| 20 | Tennessee Gas Pipeline (Contract 5083) | | | | | | | | |
| 21 | Receipt Point: Tennessee Zone L | | | | | | | | |
| 22 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 23 | Received Volume | Line 10 | 158,654 | 222,472 | 222,472 | 208,119 | 221,869 | 227,869 | 1,261,455 |
| 24 | Fuel Loss Rate | Att to Sch 5A, Line 45 of Page 2 | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% | 2.36% |
| 25 | Delivered Volume | Line 23 times (1 - Line 24) | 154,910 | 217,222 | 217,222 | 203,208 | 216,633 | 222,491 | 1,231,685 |
| 26 | Variable Transportation Rate | Att to Sch 5A, Line 28 of Page 2 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 | $ 0.3173 |
| 27 | Variable Transportation Costs | Line 25 times Line 26 | $ 49,153 | $ 68,924 | $ 68,924 | $ 64,478 | $ 68,737 | $ 70,596 | $ 390,814 |
| 28 | | | | | | | | | |
| 29 | Transportation Segment 2B | | | | | | | | |
| 30 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 31 | Receipt Point: Pleasant St. | | | | | | | | |
| 32 | Delivery Point: Northern City Gates | | | | | | | | |
| 33 | Received Volume | Line 25 | 154,910 | 217,222 | 217,222 | 203,208 | 216,633 | 222,491 | 1,231,685 |
| 34 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 35 | City Gate Delivered Volume | Line 33 times (1 - Line 34) | 154,368 | 216,462 | 216,462 | 202,496 | 215,874 | 221,712 | 1,227,374 |
| 36 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 37 | Variable Transportation Costs | Line 35 times Line 36 | $ 216 | $ 303 | $ 303 | $ 283 | $ 302 | $ 310 | $ 1,718 |

# REDACTED



Source of Supply: Chicago (Interconnect of Alliance and Vector Pipelines)
Delivered to Northern via Vector, Union, TransCanada, Iroquois, Tennessee and Granite Pipelines
Delivered to Northern via Vector, Union, TransCanada, Iroquois, Tennessee, Algonquin Pipelines and Bay State Exchange Agreement

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Purchased Volumes | Line 9 | 183,266 | 189,375 | 189,375 | 177,157 | 189,375 | - | 928,548 |
| 3 | City Gate Delivered Volume | Sum Lines 68, 88 and 108 | 174,977 | 180,930 | 180,930 | 169,257 | 180,930 | - | 887,024 |
| 4 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 5 | Variable Transportation Costs | Sum Lines 27, 47, 60, 70, 80, 90, 100 and 110 | $ 17,167 | $ 17,739 | $ 17,739 | $ 16,595 | $ 17,739 | $ - | $ 86,980 |
| 6 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 7 | Average Delivered Price | Line 5 divided by Line 2 | [redacted] | | | | | | |
| 8 | | | | | | | | | |
| 9 | Chicago Supply Costs | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | 183,266 | 189,375 | 189,375 | 177,157 | 189,375 | - | 928,548 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.130 |
| 12 | NYMEX Cost | Line 9 times Line 10 | $ 535,137 | $ 588,956 | $ 609,787 | $ 570,446 | $ 602,212 | $ - | $ 2,906,537 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 1 of Page 1 | $ 0.130 | $ 0.200 | $ 0.290 | $ 0.290 | $ 0.160 | | $ 0.214 |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | $ 23,825 | $ 37,875 | $ 54,919 | $ 51,376 | $ 30,300 | $ - | $ 198,294 |
| 15 | Total Purchase Price | Line 10 plus Line 12 | $ 3.050 | $ 3.310 | $ 3.510 | $ 3.510 | $ 3.340 | | $ 3.344 |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | $ 558,961 | $ 626,831 | $ 664,706 | $ 621,821 | $ 632,512 | $ - | $ 3,104,831 |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 1&2 | | | | | | | | |
| 20 | Vector Pipeline (Contracts FT-1-NUI-0122 and FT-1-NUI-C0122) | | | | | | | | |
| 21 | Receipt Point: Alliance | | | | | | | | |
| 22 | Delivery Point: Dawn (Interconnects with Union) | | | | | | | | |
| 23 | Received Volume | Line 10 | 183,266 | 189,375 | 189,375 | 177,157 | 189,375 | - | 928,548 |
| 24 | Fuel Loss Rate | Att to Sch 5A, Line 52 of Page 2 | 0.79% | 0.79% | 0.79% | 0.79% | 0.79% | | 0.79% |
| 25 | Delivered Volume | Line 23 times (1 - Line 24) | 181,818 | 187,879 | 187,879 | 175,758 | 187,879 | - | 921,212 |
| 26 | Variable Transportation Rate | Att to Sch 5A, Line 35 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 27 | Variable Transportation Costs | Line 25 times Line 26 | $ 255 | $ 263 | $ 263 | $ 246 | $ 263 | $ - | $ 1,290 |
| 28 | | | | | | | | | |
| 29 | Transportation Segment 3 | | | | | | | | |
| 30 | Union Pipeline (Contract M12205) | | | | | | | | |
| 31 | Receipt Point: Dawn | | | | | | | | |
| 32 | Delivery Point: Parkway (Interconnects with TransCanada) | | | | | | | | |
| 33 | Received Volume | Line 25 | 181,818 | 187,879 | 187,879 | 175,758 | 187,879 | - | 921,212 |
| 34 | Fuel Loss Rate | Att to Sch 5A, Line 50 of Page 2 | 1.01% | 1.01% | 1.01% | 1.01% | 1.01% | | 1.01% |
| 35 | Delivered Volume | Line 33 times (1 - Line 34) | 179,982 | 185,981 | 185,981 | 173,982 | 185,981 | - | 911,908 |
| 36 | Variable Transportation Rate | Att to Sch 5A, Line 33 of Page 2 | $ - | $ - | $ - | $ - | $ - | | $ - |
| 37 | Variable Transportation Costs | Line 35 times Line 36 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 38 | | | | | | | | | |
| 39 | Transportation Segment 4 | | | | | | | | |
| 40 | TransCanada Pipeline (Contract 41235) | | | | | | | | |
| 41 | Receipt Point: Parkway | | | | | | | | |
| 42 | Delivery Point: Iroquois | | | | | | | | |
| 43 | Received Volume | Line 35 | 179,982 | 185,981 | 185,981 | 173,982 | 185,981 | - | 911,908 |
| 44 | Fuel Loss Rate | Att to Sch 5A, Line 49 of Page 2 | 1.04% | 1.04% | 1.04% | 1.04% | 1.04% | | 1.04% |
| 45 | Delivered Volume | Line 43 times (1 - Line 44) | 178,110 | 184,047 | 184,047 | 172,173 | 184,047 | - | 902,424 |
| 46 | Variable Transportation Rate | Att to Sch 5A, Line 32 of Page 2 | $ - | $ - | $ - | $ - | $ - | | $ - |
| 47 | Variable Transportation Costs | Line 45 times Line 46 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 48 | | | | | | | | | |
| 49 | Transportation Segment 5 | | | | | | | | |
| 50 | Iroquois Pipeline (Contract R181001) | | | | | | | | |
| 51 | Receipt Point: Waddington | | | | | | | | |
| 52 | Delivery Point: Wright (Interconnection with Tennessee) | | | | | | | | |
| 53 | Total Contract Recevied Volume | Sendout Optimization | 196,763 | 203,321 | 203,321 | 190,204 | 203,321 | - | 996,930 |
| 54 | Received Volume | Line 45 | 178,110 | 184,047 | 184,047 | 172,173 | 184,047 | - | 902,424 |
| 55 | Percentage Allocated | Line 54 divided by Line 53 | 90.52% | 90.52% | 90.52% | 90.52% | 90.52% | 0.00% | 91% |
| 56 | Received Volume | Line 45 | 178,110 | 184,047 | 184,047 | 172,173 | 184,047 | - | 902,424 |
| 57 | Fuel Loss Rate | Att to Sch 5A, Line 40 of Page 2 | 0.32% | 0.32% | 0.32% | 0.32% | 0.32% | | 0.32% |
| 58 | Delivered Volume | Line 56 times (1 - Line 57) | 177,540 | 183,458 | 183,458 | 171,622 | 183,458 | - | 899,536 |
| 59 | Variable Transportation Rate | Att to Sch 5A, Line 22 of Page 2 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | | $ - |
| 60 | Variable Transportation Costs | Line 58 times Line 59 | $ 781 | $ 807 | $ 807 | $ 755 | $ 807 | $ - | $ - |
| 61 | | | | | | | | | |
| 62 | Transporation Segment 6A | | | | | | | | |
| 63 | Tennessee Gas Pipeline (Contract 95196) | | | | | | | | |
| 64 | Receipt Point: Wright | | | | | | | | |
| 65 | Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement) | | | | | | | | |
| 66 | Received Volume | Line 58 | 37,794 | 39,054 | 39,054 | 36,534 | 39,054 | - | 191,491 |
| 67 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 68 | City Gate Delivered Volume | Line 66 times (1 - Line 67) | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | - | 190,150 |
| 69 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 70 | Variable Transportation Costs | Line 68 times Line 69 | $ 3,393 | $ 3,506 | $ 3,506 | $ 3,280 | $ 3,506 | $ - | $ 17,190 |
| 71 | | | | | | | | | |
| 72 | Transportation Segment 6B | | | | | | | | |
| 73 | Tennessee Gas Pipeline (Contract 95196) | | | | | | | | |
| 74 | Receipt Point: Wright | | | | | | | | |
| 75 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 76 | Received Volume | Line 68 | 23,081 | 23,851 | 23,851 | 22,312 | 23,851 | - | 116,945 |
| 77 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 78 | Delivered Volume | Line 76 times (1 - Line 77) | 22,920 | 23,684 | 23,684 | 22,156 | 23,684 | - | 116,127 |
| 79 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 80 | Variable Transportation Costs | Line 78 times Line 79 | $ 2,072 | $ 2,141 | $ 2,141 | $ 2,003 | $ 2,141 | $ - | $ 10,498 |
| 81 | | | | | | | | | |
| 82 | Transportation Segment 7B | | | | | | | | |
| 83 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 84 | Receipt Point: Pleasant St. | | | | | | | | |
| 85 | Delivery Point: Northern City Gates | | | | | | | | |
| 86 | Received Volume | Line 78 | 22,920 | 23,684 | 23,684 | 22,156 | 23,684 | - | 116,127 |
| 87 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 88 | City Gate Delivered Volume | Line 86 times (1 - Line 87) | 22,840 | 23,601 | 23,601 | 22,078 | 23,601 | - | 115,720 |
| 89 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 90 | Variable Transportation Costs | Line 88 times Line 89 | $ 32 | $ 33 | $ 33 | $ 31 | $ 33 | $ - | $ 162 |
| 91 | | | | | | | | | |
| 92 | Transportation Segment 6C | | | | | | | | |
| 93 | Tennessee Gas Pipeline (Contract 41099) | | | | | | | | |
| 94 | Receipt Point: Wright | | | | | | | | |
| 95 | Delivery Point: Mendon (Interconnection with Algonquin) | | | | | | | | |
| 96 | Received Volume | Line 58 | 116,664 | 120,553 | 120,553 | 112,776 | 120,553 | - | 591,100 |
| 97 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 98 | Delivered Volume | Line 96 times (1 - Line 97) | 115,848 | 119,709 | 119,709 | 111,986 | 119,709 | - | 586,962 |
| 99 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 100 | Variable Transportation Costs | Line 98 times Line 99 | $ 10,473 | $ 10,822 | $ 10,822 | $ 10,124 | $ 10,822 | $ - | $ 53,061 |
| 101 | | | | | | | | | |
| 102 | Transportation Segment 7C | | | | | | | | |
| 103 | Algonquin Gas Transmission (Contract 93200F) | | | | | | | | |
| 104 | Receipt Point: Mendon | | | | | | | | |
| 105 | Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement) | | | | | | | | |
| 106 | Received Volume | Line 98 | 115,848 | 119,709 | 119,709 | 111,986 | 119,709 | - | 586,962 |
| 107 | Fuel Loss Rate | Att to Sch 5A, Line 37 of Page 2 | 1.07% | 0.97% | 0.97% | 0.97% | 0.97% | | 0.99% |
| 108 | City Gate Delivered Volume | Line 106 times (1 - Line 107) | 114,608 | 118,548 | 118,548 | 110,900 | 118,548 | - | 581,153 |
| 109 | Variable Transportation Rate | Att to Sch 5A, Line 19 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 110 | Variable Transportation Costs | Line 108 times Line 109 | $ 162 | $ 168 | $ 168 | $ 157 | $ 168 | $ - | $ 822 |

# REDACTED



Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 37,936 | 39,161 | 39,161 | 36,634 | 39,161 | - | 192,053 |
| 2 | City Gate Delivered Volume | Sum Lines 24 | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | - | 190,152 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Sum Lines 26 | $ 473 | $ 489 | $ 489 | $ 457 | $ 489 | $ - | $ 2,396 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Algonquin Receipts Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 37,936 | 39,161 | 39,161 | 36,634 | 39,161 | - | 192,053 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.130 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 110,773 | $ 121,790 | $ 126,098 | $ 117,963 | $ 124,532 | $ - | $ 601,155 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 21 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Algonquin Pipeline (Contract 93201A1C) | | | | | | | | |
| 20 | Receipt Point: Algonquin Receipt Points | | | | | | | | |
| 21 | Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement) | | | | | | | | |
| 22 | Received Volume | Line 15 | 37,936 | 39,161 | 39,161 | 36,634 | 39,161 | - | 192,053 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 38 of Page 2 | 1.07% | 0.97% | 0.97% | 0.97% | 0.97% | | 1.20% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | - | 190,152 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 20 of Page 2 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | $ 0.0126 | | $ 0.0126 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ 473 | $ 489 | $ 489 | $ 457 | $ 489 | $ - | $ 2,396 |

# REDACTED



Source of Supply: Tennessee Gas Pipeline Zone 6 Spot Purchases
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | - | - | - | - | 136,690 | 136,690 |
| 2 | City Gate Delivered Volume | Line 24 | - | - | - | - | - | 136,212 | 136,212 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ - | $ - | $ - | $ - | $ - | $ 191 | $ 191 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Tennessee Zone 6 Supply | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | - | - | - | - | 136,690 | 136,690 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.040 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ - | $ - | $ - | $ - | $ - | $ 415,538 | $ 415,538 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 24 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Newington or Westbrook | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | - | - | - | - | - | 136,690 | 136,690 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | - | - | - | - | - | 136,212 | 136,212 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ - | $ - | $ - | $ - | $ - | $ 191 | $ 191 |

# REDACTED



Source of Supply: Niagara (Interconnect of TransCanada and Tennessee Pipelines)
Delivered to Northern via Tennessee and Granite Pipelines
Delivered to Northern via Tennessee and Bay State Exhange Agreement

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Purchased Volumes | Line 9 | 64,153 | 66,291 | 66,291 | 62,014 | 66,291 | 54,282 | 379,322 |
| 3 | City Gate Delivered Volume | Line 45 | 63,481 | 65,597 | 65,597 | 61,364 | 65,597 | 53,714 | 375,348 |
| 4 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 5 | Variable Transportation Costs | Sum Lines 27, 37 and 47 | $ 5,848 | $ 6,043 | $ 6,043 | $ 5,653 | $ 6,043 | $ 4,948 | $ 34,576 |
| 6 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 7 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 8 | | | | | | | | | |
| 9 | Niagara Supply Costs | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | 64,153 | 66,291 | 66,291 | 62,014 | 66,291 | 54,282 | 379,322 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.117 |
| 12 | NYMEX Cost | Line 9 times Line 10 | $ 187,325 | $ 206,165 | $ 213,457 | $ 199,685 | $ 210,805 | $ 165,019 | $ 1,182,456 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 7 of Page 1 | [redacted] | | | | | | |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 15 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 1A | | | | | | | | |
| 20 | Tennessee Gas Pipeline (Contract 5292) | | | | | | | | |
| 21 | Receipt Point: Niagara | | | | | | | | |
| 22 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 23 | Received Volume | Line 9 | 38,629 | 39,917 | 39,917 | 37,341 | 39,917 | 32,191 | 227,910 |
| 24 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% |
| 25 | Delivered Volume | Line 23 times (1 - Line 24) | 38,358 | 39,637 | 39,637 | 37,080 | 39,637 | 31,965 | 226,315 |
| 26 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 |
| 27 | Variable Transportation Costs | Line 25 times Line 26 | $ 3,468 | $ 3,583 | $ 3,583 | $ 3,352 | $ 3,583 | $ 2,890 | $ 20,459 |
| 28 | | | | | | | | | |
| 29 | Transportation Segment 1B | | | | | | | | |
| 30 | Tennessee Gas Pipeline (Contract 39375) | | | | | | | | |
| 31 | Receipt Point: Niagara | | | | | | | | |
| 32 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 33 | Received Volume | Line 9 | 25,524 | 26,374 | 26,374 | 24,673 | 26,374 | 22,092 | 151,411 |
| 34 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% |
| 35 | Delivered Volume | Line 33 times (1 - Line 34) | 25,345 | 26,190 | 26,190 | 24,500 | 26,190 | 21,937 | 150,352 |
| 36 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 |
| 37 | Variable Transportation Costs | Line 35 times Line 36 | $ 2,291 | $ 2,368 | $ 2,368 | $ 2,215 | $ 2,368 | $ 1,983 | $ 13,592 |
| 38 | | | | | | | | | |
| 39 | Transportation Segment 2B | | | | | | | | |
| 40 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 41 | Receipt Point: Pleasant St. | | | | | | | | |
| 42 | Delivery Point: Northern City Gates | | | | | | | | |
| 43 | Received Volume | Line 35 | 63,703 | 65,827 | 65,827 | 61,580 | 65,827 | 53,902 | 376,667 |
| 44 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 45 | City Gate Delivered Volume | Line 43 times (1 - Line 44) | 63,481 | 65,597 | 65,597 | 61,364 | 65,597 | 53,714 | 375,348 |
| 46 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 47 | Variable Transportation Costs | Line 45 times Line 46 | $ 89 | $ 92 | $ 92 | $ 86 | $ 92 | $ 75 | $ 525 |

# REDACTED



Source of Supply: Iroquois Receipts (Interconnect of TransCanada and Iroquoios Pipelines)
Delivered to Northern via Iroquois, Tennessee and Granite Pipelines
Delivered to Northern via Iroquois, Tennessee, Algonquin Pipelines and Bay State Exchange Agreement

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Purchased Volumes | Line 9 | 18,653 | 19,274 | 19,274 | 18,031 | 19,274 | - | 94,506 |
| 3 | City Gate Delivered Volume | Line 38 | 18,325 | 18,948 | 18,948 | 17,725 | 18,948 | - | 92,894 |
| 4 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 5 | Variable Transportation Costs | Sum Lines 30, 40, 50, 60, 70 and 80 | $ 1,771 | $ 1,830 | $ 1,830 | $ 1,712 | $ 1,830 | $ - | $ 8,974 |
| 6 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 7 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 8 | | | | | | | | | |
| 9 | Irqoquois Receipts Supply Costs | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | 18,653 | 19,274 | 19,274 | 18,031 | 19,274 | - | 94,506 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.130 |
| 12 | NYMEX Cost | Line 9 times Line 10 | $ 54,466 | $ 59,943 | $ 62,063 | $ 58,059 | $ 61,292 | $ - | $ 295,824 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 2 of Page 1 | [redacted] | | | | | | |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 15 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 5 | | | | | | | | |
| 20 | Iroquois Pipeline (Contract R181001) | | | | | | | | |
| 21 | Receipt Point: Waddington | | | | | | | | |
| 22 | Delivery Point: Wright (Interconnection with Tennessee) | | | | | | | | |
| 23 | Total Contract Recevied Volume | Sendout Optimization | 196,763 | 203,321 | 203,321 | 190,204 | 203,321 | - | 996,930 |
| 24 | Received Volume | Line 10 | 18,653 | 19,274 | 19,274 | 18,031 | 19,274 | - | 94,506 |
| 25 | Percentage Allocated | Line 24 divided by Line 23 | 9.48% | 9.48% | 9.48% | 9.48% | 9.48% | 0.00% | 9% |
| 26 | Received Volume | Line 15 | 18,653 | 19,274 | 19,274 | 18,031 | 19,274 | - | 94,506 |
| 27 | Fuel Loss Rate | Att to Sch 5A, Line 40 of Page 2 | 0.32% | 0.32% | 0.32% | 0.32% | 0.32% | | 0.32% |
| 28 | Delivered Volume | Line 26 times (1 - Line 27) | 18,593 | 19,213 | 19,213 | 17,973 | 19,213 | - | 94,204 |
| 29 | Variable Transportation Rate | Att to Sch 5A, Line 22 of Page 2 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | $ 0.0044 | | $ - |
| 30 | Variable Transportation Costs | Line 28 times Line 29 | $ 82 | $ 85 | $ 85 | $ 79 | $ 85 | $ - | $ - |
| 31 | | | | | | | | | |
| 32 | Transporation Segment 6A | | | | | | | | |
| 33 | Tennessee Gas Pipeline (Contract 95196) | | | | | | | | |
| 34 | Receipt Point: Wright | | | | | | | | |
| 35 | Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement) | | | | | | | | |
| 36 | Received Volume | Line 28 | 3,958 | 4,090 | 4,090 | 3,826 | 4,090 | - | 20,054 |
| 37 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 38 | City Gate Delivered Volume | Line 36 times (1 - Line 37) | 3,930 | 4,061 | 4,061 | 3,799 | 4,061 | - | 19,914 |
| 39 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 40 | Variable Transportation Costs | Line 38 times Line 39 | $ 355 | $ 367 | $ 367 | $ 343 | $ 367 | $ - | $ 1,800 |
| 41 | | | | | | | | | |
| 42 | Transportation Segment 6B | | | | | | | | |
| 43 | Tennessee Gas Pipeline (Contract 95196) | | | | | | | | |
| 44 | Receipt Point: Wright | | | | | | | | |
| 45 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 46 | Received Volume | Line 38 | 2,417 | 2,498 | 2,498 | 2,337 | 2,498 | - | 12,247 |
| 47 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 48 | Delivered Volume | Line 46 times (1 - Line 47) | 2,400 | 2,480 | 2,480 | 2,320 | 2,480 | - | 12,161 |
| 49 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 50 | Variable Transportation Costs | Line 48 times Line 49 | $ 217 | $ 224 | $ 224 | $ 210 | $ 224 | $ - | $ 1,099 |
| 51 | | | | | | | | | |
| 52 | Transportation Segment 7B | | | | | | | | |
| 53 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 54 | Receipt Point: Pleasant St. | | | | | | | | |
| 55 | Delivery Point: Northern City Gates | | | | | | | | |
| 56 | Received Volume | Line 48 | 2,400 | 2,480 | 2,480 | 2,320 | 2,480 | - | 12,161 |
| 57 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 58 | City Gate Delivered Volume | Line 56 times (1 - Line 57) | 2,392 | 2,472 | 2,472 | 2,312 | 2,472 | - | 12,119 |
| 59 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 60 | Variable Transportation Costs | Line 58 times Line 59 | $ 3 | $ 3 | $ 3 | $ 3 | $ 3 | $ - | $ 17 |
| 61 | | | | | | | | | |
| 62 | Transportation Segment 6C | | | | | | | | |
| 63 | Tennessee Gas Pipeline (Contract 41099) | | | | | | | | |
| 64 | Receipt Point: Wright | | | | | | | | |
| 65 | Delivery Point: Mendon (Interconnection with Algonquin) | | | | | | | | |
| 66 | Received Volume | Line 28 | 12,218 | 12,625 | 12,625 | 11,810 | 12,625 | - | 61,903 |
| 67 | Fuel Loss Rate | Att to Sch 5A, Line 47 of Page 2 | 0.70% | 0.70% | 0.70% | 0.70% | 0.70% | | 0.70% |
| 68 | Delivered Volume | Line 66 times (1 - Line 67) | 12,132 | 12,537 | 12,537 | 11,728 | 12,537 | - | 61,470 |
| 69 | Variable Transportation Rate | Att to Sch 5A, Line 30 of Page 2 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | $ 0.0904 | | $ 0.0904 |
| 70 | Variable Transportation Costs | Line 68 times Line 69 | $ 1,097 | $ 1,133 | $ 1,133 | $ 1,060 | $ 1,133 | $ - | $ 5,557 |
| 71 | | | | | | | | | |
| 72 | Transportation Segment 7C | | | | | | | | |
| 73 | Algonquin Gas Transmission (Contract 93200F) | | | | | | | | |
| 74 | Receipt Point: Mendon | | | | | | | | |
| 75 | Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement) | | | | | | | | |
| 76 | Received Volume | Line 68 | 12,132 | 12,537 | 12,537 | 11,728 | 12,537 | - | 61,470 |
| 77 | Fuel Loss Rate | Att to Sch 5A, Line 37 of Page 2 | 1.07% | 0.97% | 0.97% | 0.97% | 0.97% | | 0.99% |
| 78 | City Gate Delivered Volume | Line 76 times (1 - Line 77) | 12,002 | 12,415 | 12,415 | 11,614 | 12,415 | - | 60,861 |
| 79 | Variable Transportation Rate | Att to Sch 5A, Line 19 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 80 | Variable Transportation Costs | Line 78 times Line 79 | $ 17 | $ 18 | $ 18 | $ 16 | $ 18 | $ - | $ 86 |

# REDACTED



Source of Supply: PNGTS (Pittsburg, NH)
Delivered to Northern via PNGTS and Granite Pipelines

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 24,000 | 24,800 | 24,800 | 23,200 | 24,800 | 30,000 | 151,600 |
| 2 | City Gate Delivered Volume | Line 34 | 23,916 | 24,713 | 24,713 | 23,119 | 24,713 | 29,895 | 151,069 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Sum Lines 26 and 36 | $ 67 | $ 69 | $ 69 | $ 65 | $ 69 | $ 84 | $ 424 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Portland Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 24,000 | 24,800 | 24,800 | 23,200 | 24,800 | 30,000 | 151,600 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.112 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 70,080 | $ 77,128 | $ 79,856 | $ 74,704 | $ 78,864 | $ 91,200 | $ 471,832 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 5 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | PNGTS (Contract 1997-003) | | | | | | | | |
| 20 | Receipt Point: Pittsburgh, NH (Interconnects with TransCanada at E. Hereford) | | | | | | | | |
| 21 | Delivery Point: Granite (Westbrook) | | | | | | | | |
| 22 | Received Volume | Line 9 | 24,000 | 24,800 | 24,800 | 23,200 | 24,800 | 30,000 | 151,600 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 41 of Page 2 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 24 | Delivered Volume | Line 22 times (1 - Line 23) | 24,000 | 24,800 | 24,800 | 23,200 | 24,800 | 30,000 | 151,600 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 24 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ 34 | $ 35 | $ 35 | $ 32 | $ 35 | $ 42 | $ 212 |
| 27 | | | | | | | | | |
| 28 | Transportation Segment 2 | | | | | | | | |
| 29 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 30 | Receipt Point: Granite (Westbrook) | | | | | | | | |
| 31 | Delivery Point: Northern City Gates | | | | | | | | |
| 32 | Received Volume | Line 24 | 24,000 | 24,800 | 24,800 | 23,200 | 24,800 | 30,000 | 151,600 |
| 33 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 34 | City Gate Delivered Volume | Line 32 times (1 - Line 33) | 23,916 | 24,713 | 24,713 | 23,119 | 24,713 | 29,895 | 151,069 |
| 35 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 36 | Variable Transportation Costs | Line 34 times Line 35 | $ 33 | $ 35 | $ 35 | $ 32 | $ 35 | $ 42 | $ 211 |

# REDACTED



Source of Supply: Maritimes Baseload Supply
City-Gate Delivered Supply

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| 2 | City Gate Delivered Volume | Line 1 | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | N/A | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Maritimes Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.126 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 657,000 | $ 723,075 | $ 748,650 | $ 700,350 | $ 739,350 | $ 182,400 | $ 3,750,825 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 6 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |

REDACTED



Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 81,000 | 841,000 |
| 2 | City Gate Delivered Volume | Line 24 | 149,475 | 154,458 | 154,458 | 144,493 | 154,458 | 80,717 | 838,057 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ 209 | $ 216 | $ 216 | $ 202 | $ 216 | $ 113 | $ 1,173 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Portland Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 81,000 | 841,000 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.122 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ 438,000 | $ 482,050 | $ 499,100 | $ 466,900 | $ 492,900 | $ 246,240 | $ 2,625,190 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 3 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Granite (Westbrook) | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | 150,000 | 155,000 | 155,000 | 145,000 | 155,000 | 81,000 | 841,000 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | 149,475 | 154,458 | 154,458 | 144,493 | 154,458 | 80,717 | 838,057 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ 209 | $ 216 | $ 216 | $ 202 | $ 216 | $ 113 | $ 1,173 |

# REDACTED



Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | 77,500 | 77,500 | 72,500 | - | - | 227,500 |
| 2 | City Gate Delivered Volume | Line 24 | - | 77,229 | 77,229 | 72,246 | - | - | 226,704 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ - | $ 108 | $ 108 | $ 101 | $ - | $ - | $ 317 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Portland Supply Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | 77,500 | 77,500 | 72,500 | - | - | 227,500 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.183 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ - | $ 241,025 | $ 249,550 | $ 233,450 | $ - | $ - | $ 724,025 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 4 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Granite (Westbrook) | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | - | 77,500 | 77,500 | 72,500 | - | - | 227,500 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | - | 77,229 | 77,229 | 72,246 | - | - | 226,704 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ - | $ 108 | $ 108 | $ 101 | $ - | $ - | $ 317 |

Source of Supply: Washington 10 Inventory
Delivered to Northern via TransCanada, PNGTS and Granite Pipelines

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gross Withdrawn Volume | Line 9 | 11,431 | 575,174 | 778,167 | 742,234 | 215,550 | - | 2,322,555 |
| 2 | City Gate Delivered Volume | Line 68 | 11,091 | 558,046 | 754,995 | 720,132 | 209,131 | - | 2,253,395 |
| 3 | Total Withdrawal Costs | Line 16 | $ 36,625 | $ 1,842,856 | $ 2,493,246 | $ 2,378,117 | $ 690,622 | $ - | $ 7,441,466 |
| 4 | Variable Transportation Costs | Sum Lines 27, 37, 47, 60 and 70 | $ 47 | $ 2,366 | $ 3,201 | $ 3,053 | $ 887 | $ - | $ 9,553 |
| 5 | Total City Gate Delivered Costs | Line 3 plus Line 4 | $ 36,672 | $ 1,845,222 | $ 2,496,447 | $ 2,381,170 | $ 691,508 | $ - | $ 7,451,019 |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | $ 3.307 | | $ 3.307 |
| 7 | | | | | | | | | |
| 8 | <u>Washington 10 Withdrawn Inventory (Segment 1)</u> | | | | | | | | |
| 9 | Gross Withdrawn Volume | Sendout Optimization | 11,431 | 575,174 | 778,167 | 742,234 | 215,550 | - | 2,322,555 |
| 10 | Withdrawal Rate | Att to Sch 5A, Line 3 of Page 3 | $ - | $ - | $ - | $ - | $ - | | $ - |
| 11 | Withdrawal Charges | Line 9 times Line 10 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 12 | Inventory Rate | FXW-8 | $ 3.2040 | $ 3.2040 | $ 3.2040 | $ 3.2040 | $ 3.2040 | | $ 3.2040 |
| 13 | Withdrawn Inventory Value | Line 9 times Line 12 | $ 36,625 | $ 1,842,856 | $ 2,493,246 | $ 2,378,117 | $ 690,622 | $ - | $ 7,441,466 |
| 14 | Withdrawal Fuel Losses | Att to Sch 5A, Line 3 of Page 3 times Lin | 34 | 1,726 | 2,335 | 2,227 | 647 | - | 6,968 |
| 15 | Net Withdrawn Volume | Line 9 minus Line 14 | 11,397 | 573,448 | 775,832 | 740,007 | 214,903 | - | 2,315,587 |
| 16 | Total Withdrawal Costs | Line 11 plus Line 13 | $ 36,625 | $ 1,842,856 | $ 2,493,246 | $ 2,378,117 | $ 690,622 | $ - | $ 7,441,466 |
| 17 | | | | | | | | | |
| 18 | <u>Transportation Fuel Losses and Variable Charges</u> | | | | | | | | |
| 19 | Transportation Segment 2A | | | | | | | | |
| 20 | Vector Pipeline (Contract CRL-NUI-0725) | | | | | | | | |
| 21 | Receipt Point: Washington 10 Withdrawal Meter | | | | | | | | |
| 22 | Delivery Point: Dawn (Interconnects with TransCanada) | | | | | | | | |
| 23 | Received Volume | Line 15 | 9,532 | 260,644 | 347,347 | 350,872 | 123,162 | - | 1,091,558 |
| 24 | Fuel Loss Rate | Att to Sch 5A, Line 53 of Page 2 | 0.29% | 0.29% | 0.29% | 0.29% | 0.29% | | 0.29% |
| 25 | Delivered Volume | Line 23 times (1 - Line 24) | 9,505 | 259,888 | 346,339 | 349,855 | 122,805 | - | 1,088,392 |
| 26 | Variable Transportation Rate | Att to Sch 5A, Line 36 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 27 | Variable Transportation Costs | Line 25 times Line 26 | $ 13 | $ 364 | $ 485 | $ 490 | $ 172 | $ - | $ 1,524 |
| 28 | | | | | | | | | |
| 29 | Transportation Segment 2B | | | | | | | | |
| 30 | Vector Pipeline (Contract CRL-NUI-0727) | | | | | | | | |
| 31 | Receipt Point: Washington 10 Withdrawal Meter | | | | | | | | |
| 32 | Delivery Point: Union Dawn (Interconnects with TransCanada) | | | | | | | | |
| 33 | Received Volume | Line 25 | 1,864 | 312,804 | 428,485 | 389,135 | 91,741 | - | 1,224,029 |
| 34 | Fuel Loss Rate | Att to Sch 5A, Line 53 of Page 2 | 0.29% | 0.29% | 0.29% | 0.29% | 0.29% | | 0.29% |
| 35 | Delivered Volume | Line 33 times (1 - Line 34) | 1,859 | 311,897 | 427,243 | 388,006 | 91,475 | - | 1,220,480 |
| 36 | Variable Transportation Rate | Att to Sch 5A, Line 36 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 37 | Variable Transportation Costs | Line 35 times Line 36 | $ 3 | $ 437 | $ 598 | $ 543 | $ 128 | $ - | $ 1,709 |
| 38 | | | | | | | | | |
| 39 | Transportation Segment 3 | | | | | | | | |
| 40 | TransCanada Pipeline (Contract 33322) | | | | | | | | |
| 41 | Receipt Point: Union Dawn | | | | | | | | |
| 42 | Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh) | | | | | | | | |
| 43 | Received Volume | Line 35 | 11,364 | 571,785 | 773,582 | 737,861 | 214,280 | - | 2,308,872 |
| 44 | Fuel Loss Rate | Att to Sch 5A, Line 48 of Page 2 | 2.06% | 2.06% | 2.06% | 2.06% | 2.06% | | 2.06% |
| 45 | Delivered Volume | Line 43 times (1 - Line 44) | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | - | 2,261,309 |
| 46 | Variable Transportation Rate | Att to Sch 5A, Line 31 of Page 2 | $ - | $ - | $ - | $ - | $ - | | $ - |
| 47 | Variable Transportation Costs | Line 45 times Line 46 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 48 | | | | | | | | | |
| 49 | Transportation Segment 4 | | | | | | | | |
| 50 | PNGTS (Contract 1997-004) | | | | | | | | |
| 51 | Receipt Point: Pittsburgh, NH (Interconnects with TransCanada at E. Hereford) | | | | | | | | |
| 52 | Delivery Point: Granite (Westbrook, Newington, Eliot) | | | | | | | | |
| 53 | Total Contract Recevied Volume | Sendout Optimization | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | - | 2,261,309 |
| 54 | Received Volume | Line 45 | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | - | 2,261,309 |
| 55 | Percentage Allocated | Line 54 divided by Line 53 | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 0.00% | 100.00% |
| 56 | Total Contract Recevied Volume | Sendout Optimization | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | | 2,261,309 |
| 57 | Fuel Loss Rate | Att to Sch 5A, Line 41 of Page 2 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | | 0.00% |
| 58 | Delivered Volume | Line 56 times (1 - Line 57) | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | - | 2,261,309 |
| 59 | Variable Transportation Rate | Att to Sch 5A, Line 24 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | | $ 0.0014 |
| 60 | Variable Transportation Costs | Line 58 times Line 59 | $ 16 | $ 784 | $ 1,061 | $ 1,012 | $ 294 | $ - | $ 3,166 |
| 61 | | | | | | | | | |
| 62 | Transportation Segment 5 | | | | | | | | |
| 63 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 64 | Receipt Point: Westbrook, Newington, Eliot | | | | | | | | |
| 65 | Delivery Point: Northern City Gates | | | | | | | | |
| 66 | Received Volume | Line 58 | 11,130 | 560,006 | 757,646 | 722,661 | 209,866 | - | 2,261,309 |
| 67 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 68 | City Gate Delivered Volume | Line 66 times (1 - Line 67) | 11,091 | 558,046 | 754,995 | 720,132 | 209,131 | - | 2,253,395 |
| 69 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 70 | Variable Transportation Costs | Line 68 times Line 69 | $ 16 | $ 781 | $ 1,057 | $ 1,008 | $ 293 | $ - | $ 3,155 |

Source of Supply: Tennessee FS-MA Inventory
Delivered to Northern via Tennessee and Granite Pipelines

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gross Withdrawn Volume | Line 9 | - | - | 64,563 | 71,216 | 75,931 | - | 211,710 |
| 2 | City Gate Delivered Volume | Line 38 | - | - | 63,771 | 70,343 | 74,999 | - | 209,113 |
| 3 | Total Withdrawal Costs | Line 16 | $ - | $ - | $ 109,027 | $ 120,263 | $ 128,225 | $ - | $ 357,515 |
| 4 | Variable Transportation Costs | Sum Lines 30 and 40 | $ - | $ - | $ 7,788 | $ 8,590 | $ 9,159 | $ - | $ 25,537 |
| 5 | Total City Gate Delivered Costs | Line 3 plus Line 4 | $ - | $ - | $ 116,815 | $ 128,854 | $ 137,384 | $ - | $ 383,052 |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | $ 1.832 | $ 1.832 | $ 1.832 | | $ 1.832 |
| 7 | | | | | | | | | |
| 8 | Tennessee FS-MA Withdrawn Inventory (Segment 1) | | | | | | | | |
| 9 | Gross Withdrawn Volume | Sendout Optimization | - | - | 64,563 | 71,216 | 75,931 | - | 211,710 |
| 10 | Withdrawal Rate | Att to Sch 5A, Line 1 of Page 3 | | | $ 0.0087 | $ 0.0087 | $ 0.0087 | | $ 0.0087 |
| 11 | Withdrawal Charges | Line 9 times Line 10 | $ - | $ - | $ 562 | $ 620 | $ 661 | $ - | $ 1,842 |
| 12 | Inventory Rate | FXW-8 | | | $ 1.6800 | $ 1.6800 | $ 1.6800 | | $ 1.6800 |
| 13 | Withdrawn Inventory Value | Line 9 times Line 12 | $ - | $ - | $ 108,465 | $ 119,644 | $ 127,564 | $ - | $ 355,673 |
| 14 | Withdrawal Fuel Losses | Att to Sch 5A, Line 1 of Page 3 times Line 9 | - | - | - | - | - | - | - |
| 15 | Net Withdrawn Volume | Line 9 minus Line 14 | - | - | 64,563 | 71,216 | 75,931 | - | 211,710 |
| 16 | Total Withdrawal Costs | Line 11 plus Line 13 | $ - | $ - | $ 109,027 | $ 120,263 | $ 128,225 | $ - | $ 357,515 |
| 17 | | | | | | | | | |
| 18 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 19 | Transportation Segment 2 | | | | | | | | |
| 20 | Tennessee Gas Pipeline (Contract 5265) | | | | | | | | |
| 21 | Receipt Point: Tennessee FS-MA Withdrawal Meter | | | | | | | | |
| 22 | Delivery Point: Pleasant St. (Interconnection with Granite) | | | | | | | | |
| 23 | Total Contract Recevied Volume | Sendout Optimization | 73,672 | 76,128 | 76,128 | 71,216 | 76,128 | | 446,944 |
| 24 | Received Volume | Line 15 | - | - | 64,563 | 71,216 | 75,931 | - | 211,710 |
| 25 | Percentage Allocated | Line 24 divided by Line 23 | 0.00% | 0.00% | 84.81% | 100.00% | 99.74% | 0.00% | 47.37% |
| 26 | Received Volume | Line 10 | - | - | 64,563 | 71,216 | 75,931 | - | 211,710 |
| 27 | Fuel Loss Rate | Att to Sch 5A, Line 46 of Page 2 | | | 0.88% | 0.88% | 0.88% | | 0.88% |
| 28 | Delivered Volume | Line 26 times (1 - Line 27) | - | - | 63,995 | 70,590 | 75,263 | - | 209,847 |
| 29 | Variable Transportation Rate | Att to Sch 5A, Line 29 of Page 2 | | | $ 0.1203 | $ 0.1203 | $ 0.1203 | | $ 0.1203 |
| 30 | Variable Transportation Costs | Line 28 times Line 29 | $ - | $ - | $ 7,699 | $ 8,492 | $ 9,054 | $ - | $ 25,245 |
| 31 | | | | | | | | | |
| 32 | Transportation Segment 3 | | | | | | | | |
| 33 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 34 | Receipt Point: Pleasant St. | | | | | | | | |
| 35 | Delivery Point: Northern City Gates | | | | | | | | |
| 36 | Received Volume | Line 28 | - | - | 63,995 | 70,590 | 75,263 | - | 209,847 |
| 37 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 38 | City Gate Delivered Volume | Line 36 times (1 - Line 37) | - | - | 63,771 | 70,343 | 74,999 | - | 209,113 |
| 39 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 40 | Variable Transportation Costs | Line 38 times Line 39 | $ - | $ - | $ 89 | $ 98 | $ 105 | $ - | $ 293 |

# REDACTED



Source of Supply: Peaking Contract 1
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | - | 12,680 | - | - | - | 12,680 |
| 2 | City Gate Delivered Volume | Line 24 | - | - | 12,636 | - | - | - | 12,636 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ - | $ - | $ 18 | $ - | $ - | $ - | $ 18 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Peaking Contract 1 Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | - | 12,680 | - | - | - | 12,680 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.220 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ - | $ - | $ 40,831 | $ - | $ - | $ - | $ 40,831 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 12 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Pleasant St. | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | - | - | 12,680 | - | - | - | 12,680 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | - | - | 12,636 | - | - | - | 12,636 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ - | $ - | $ 18 | $ - | $ - | $ - | $ 18 |

# REDACTED



Source of Supply: Peaking Supply 2
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | - | 88,969 | - | - | - | 88,969 |
| 2 | City Gate Delivered Volume | Line 24 | - | - | 88,658 | - | - | - | 88,658 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ - | $ - | $ 124 | $ - | $ - | $ - | $ 124 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Peaking Supply 2 Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | - | 88,969 | - | - | - | 88,969 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.220 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ - | $ - | $ 286,480 | $ - | $ - | $ - | $ 286,480 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 13 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Newington or Westbrook | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | - | - | 88,969 | - | - | - | 88,969 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | - | - | 88,658 | - | - | - | 88,658 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ - | $ - | $ 124 | $ - | $ - | $ - | $ 124 |

# REDACTED

Source of Supply: Peaking Contract 3
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | - | 52,332 | - | - | - | 52,332 |
| 2 | City Gate Delivered Volume | Line 9 | - | - | 52,332 | - | - | - | 52,332 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Not Applicable | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Peaking Contract 3 Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | - | 52,332 | - | - | - | 52,332 |
| 10 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.220 |
| 11 | NYMEX Cost | Line 9 times Line 10 | $ - | $ - | $ 168,509 | $ - | $ - | $ - | $ 168,509 |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 14 of Page 1 | [redacted] | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |

# REDACTED

Source of Supply: Peaking Contract 4
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 9 | - | - | 176,969 | 51,031 | 12,000 | - | 240,000 |
| 2 | City Gate Delivered Volume | Line 24 | - | - | 176,349 | 50,853 | 11,958 | - | 239,160 |
| 3 | Total Purchase Cost | Line 15 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | Line 26 | $ - | $ - | $ 247 | $ 71 | $ 17 | $ - | $ 335 |
| 5 | Total City Gate Delivered Costs | Sum Lines 3 and 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Peaking Contract 4 Costs | | | | | | | | |
| 9 | Purchased Volumes | Sendout Optimization | - | - | 176,969 | 51,031 | 12,000 | - | 240,000 |
| 10 | Commodity Price | Att to Sch 5A, Line 23 of Page 1 | [redacted] | | | | | | |
| 11 | Commodity Cost | Line 9 times Line 10 | | | | | | | |
| 12 | NYMEX Basis Price | Att to Sch 5A, Line 23 of Page 1 | | | | | | | |
| 13 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 14 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 15 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 16 | | | | | | | | | |
| 17 | Transportation Fuel Losses and Variable Charges | | | | | | | | |
| 18 | Transportation Segment 1 | | | | | | | | |
| 19 | Granite State Gas Transmission (Contract 16-100-FT-NN) | | | | | | | | |
| 20 | Receipt Point: Newington or Westbrook | | | | | | | | |
| 21 | Delivery Point: Northern City Gates | | | | | | | | |
| 22 | Received Volume | Line 9 | - | - | 176,969 | 51,031 | 12,000 | - | 240,000 |
| 23 | Fuel Loss Rate | Att to Sch 5A, Line 39 of Page 2 | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% | 0.35% |
| 24 | City Gate Delivered Volume | Line 22 times (1 - Line 23) | - | - | 176,349 | 50,853 | 11,958 | - | 239,160 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 21 of Page 2 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 | $ 0.0014 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ - | $ - | $ 247 | $ 71 | $ 17 | $ - | $ 335 |

# REDACTED



Source of Supply: Northern LNG Inventory
On-System Storage

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gross Withdrawn Volume | Line 9 | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| 2 | City Gate Delivered Volume | Line 15 | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| 3 | Total Withdrawal Costs | Line 16 | [redacted] | | | | | | |
| 4 | Variable Transportation Costs | N/A | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 5 | Total City Gate Delivered Costs | Line 3 plus Line 4 | [redacted] | | | | | | |
| 6 | Average Delivered Price | Line 5 divided by Line 2 | | | | | | | |
| 7 | | | | | | | | | |
| 8 | Northern LNG Withdrawn Inventory | | | | | | | | |
| 9 | Gross Withdrawn Volume | Sendout Optimization | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| 10 | Withdrawal Rate | N/A | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 11 | Withdrawal Charges | Line 9 times Line 10 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 12 | Inventory Rate | FXW-8 | [redacted] | | | | | | |
| 13 | Withdrawn Inventory Value | Line 9 times Line 12 | | | | | | | |
| 14 | Withdrawal Fuel Losses | N/A | - | - | - | - | - | - | - |
| 15 | Net Withdrawn Volume | Line 9 minus Line 14 | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| 16 | Total Withdrawal Costs | Line 11 plus Line 13 | [redacted] | | | | | | |

# REDACTED



Source of Supply: LNG Supply
Delivered to Northern via LNG Trucking Contract

Denotes Confidential Information

| Line | City Gate Delivered Costs | Reference | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | 2015-2016 Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Purchased Volumes | Line 22 | 932 | 3,403 | 38,347 | 2,061 | 2,203 | 3,330 | 50,277 |
| 2 | Storage Delivered Volume | Line 24 | 932 | 3,403 | 38,347 | 2,061 | 2,203 | 3,330 | 50,277 |
| 3 | Total Purchase Price | Line 15 | [redacted] | | | | | | |
| 4 | Total Purchase Cost | Line 10 times Line 12 | | | | | | | |
| 5 | Variable Transportation Costs | Line 26 | | | | | | | |
| 6 | Total Storage Delivered Costs | Line 13 plus Line 14 | | | | | | | |
| 7 | Average Delivered Price | Line 15 divided by Line 11 | | | | | | | |
| 8 | | | | | | | | | |
| 9 | <u>LNG Supply Costs</u> | | | | | | | | |
| 10 | Purchased Volumes | Sendout Optimization | 932 | 3,403 | 38,347 | 2,061 | 2,203 | 3,330 | 50,277 |
| 11 | Monthly NYMEX Price | Att to Sch 5A, Line 24 of Page 1 | $ 2.920 | $ 3.110 | $ 3.220 | $ 3.220 | $ 3.180 | $ 3.040 | $ 3.193 |
| 12 | NYMEX Costs | Line 9 times Line 10 | $ 2,722 | $ 10,585 | $ 123,477 | $ 6,637 | $ 7,007 | $ 10,123 | $ 160,551 |
| 13 | NYMEX Basis Price | Att to Sch 5A, Line 24 of Page 1 | [redacted] | | | | | | |
| 14 | NYMEX Basis Costs | Line 9 times Line 12 | | | | | | | |
| 15 | Total Purchase Price | Line 10 plus Line 12 | | | | | | | |
| 16 | Total Purchase Cost | Line 11 plus Line 13 | | | | | | | |
| 17 | | | | | | | | | |
| 18 | Transportation Segment 3 | | | | | | | | |
| 19 | Trucking Contract | | | | | | | | |
| 20 | Receipt Point: Distrigas Terminal | | | | | | | | |
| 21 | Delivery Point: Northern LNG Facility (Lewiston, ME) | | | | | | | | |
| 22 | Received Volume | Line 19 minus Line 31 | 932 | 3,403 | 38,347 | 2,061 | 2,203 | 3,330 | 50,277 |
| 23 | Fuel Loss Rate | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 24 | Storage Delivered Volume | Line 22 times (1 - Line 23) | 932 | 3,403 | 38,347 | 2,061 | 2,203 | 3,330 | 50,277 |
| 25 | Variable Transportation Rate | Att to Sch 5A, Line 23 of Page 2 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 | $ 1.1900 |
| 26 | Variable Transportation Costs | Line 24 times Line 25 | $ 1,109 | $ 4,050 | $ 45,633 | $ 2,453 | $ 2,622 | $ 3,963 | $ 59,830 |

# Schedule 7

Northern Utilities, Inc.
Hedging Expense and Option Contract Value
November 2015 through March 2016
As of 9/4/2015

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Winter |
|---|---|---|---|---|---|---|
| NYMEX Options Contracts | 27 | 42 | 52 | 41 | 33 | 195 |
| Option Contract Price | $ 0.105 | $ 0.108 | $ 0.110 | $ 0.103 | $ 0.105 | |
| **Hedging Expense** | $ 28,350 | $ 45,360 | $ 57,200 | $ 42,230 | $ 34,650 | $ 207,790 |

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Winter |
|---|---|---|---|---|---|---|
| NYMEX Options Contracts | 27 | 42 | 52 | 41 | 33 | 195 |
| NYMEX Option Strike Price | $ 5.700 | $ 6.000 | $ 6.500 | $ 6.250 | $ 6.500 | |
| Futures Price | $ 2.741 | $ 2.897 | $ 3.007 | $ 3.010 | $ 2.977 | |
| **Option Contract Value**[1] | $ - | $ - | $ - | $ - | $ - | $ - |

[1] If Futures Price exceeds Strike Price upon contract settlement, then value upon expiration equals the difference between the Futures Price and Strike Price.  If Futures Price is below the Strike Price upon contract settlement, then the option will expire with no value.

# Schedule 8

# NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

## Typical Residential Heating Bill - 783 therms/year

## Comparison of Winter 2015-2016 vs. Winter 2014-2015

| 1 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | Typical Usage: therms | | 59 | 100 | 140 | 142 | 118 | 80 | 639 | 49 | 25 | 16 | 14 | 15 | 25 | 144 | 783 |
| 3 | **Winter 2015 - 2016** | | | | | | | | | | | | | | | | | |
| 4 | Customer Charge | units @ | $ 21.36 | $21.36 | $21.36 | $21.36 | $21.36 | $21.36 | $21.36 | $128.16 | | | | | | | | |
| 5 | First | 50 units @ | $0.6239 | $31.20 | $31.20 | $31.20 | $31.20 | $31.20 | $31.20 | $187.17 | | | | | | | | |
| 6 | Over | 50 units @ | $0.5103 | $4.39 | $25.45 | $45.97 | $46.77 | $34.80 | $15.55 | $172.92 | | | | | | | | |
| 7 | | COG 1 | $0.6570 | $38.50 | | | | | | $38.50 | | | | | | | | |
| 8 | | COG 2 | $0.6570 | | $65.62 | | | | | $65.62 | | | | | | | | |
| 9 | | COG 3 | $0.6570 | | | $92.03 | | | | $92.03 | | | | | | | | |
| 10 | | COG 4 | $0.6570 | | | | $93.06 | | | $93.06 | | | | | | | | |
| 11 | | COG 5 | $0.6570 | | | | | $77.66 | | $77.66 | | | | | | | | |
| 12 | | COG 6 | $0.6570 | | | | | | $52.87 | $52.87 | | | | | | | | |
| 13 | | LDAC | $0.0374 | $2.19 | $3.74 | $5.24 | $5.30 | $4.42 | $3.01 | $23.89 | | | | | | | | |
| 14 | **Summer 2015** | | | | | | | | | | | | | | | | | |
| 15 | Customer Charge | units @ | $ 21.36 | | | | | | | | $ 21.36 | $21.36 | $21.36 | $21.36 | $ 21.36 | $21.36 | $128.16 | |
| 16 | First | 50 units @ | $0.5449 | | | | | | | | $26.52 | $13.42 | $8.90 | $7.72 | $8.36 | $13.73 | $78.64 | |
| 17 | Over | 50 units @ | $0.5449 | | | | | | | | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | |
| 18 | | COG 1 | $0.3238 | | | | | | | | $15.76 | | | | | | $15.76 | |
| 19 | | COG 2 | $0.3238 | | | | | | | | | $7.97 | | | | | $7.97 | |
| 20 | | COG 3 | $0.2678 | | | | | | | | | | $4.37 | | | | $4.37 | |
| 21 | | COG 4 | $0.2678 | | | | | | | | | | | $3.79 | | | $3.79 | |
| 22 | | COG 5 | $0.2678 | | | | | | | | | | | | $4.11 | | $4.11 | |
| 23 | | COG 6 | $0.2678 | | | | | | | | | | | | | $6.75 | $6.75 | |
| 24 | Summer Period 2015 Weighted Avg. COG | | $0.2962 | | | | | | | | | | | | | | | |
| 25 | | LDAC | $ 0.0446 | | | | | | | | $2.17 | $1.10 | $0.73 | $0.63 | $0.68 | $1.12 | $6.44 | |
| 26 | | | **TOTAL** | $97.63 | $147.36 | $195.79 | $197.68 | $169.43 | $123.98 | **$931.88** | $65.81 | $43.85 | $35.36 | $33.50 | $34.51 | $42.96 | $255.99 | $1,187.87 |
| | Base Rate Change Winter 15-16 vs. Winter 14-15 | | **$ Change** | $3.60 | $4.94 | $6.23 | $6.29 | $5.53 | $4.31 | **$30.90** | | | | | | | | |
| | | | **% Change** | 3% | 3% | 2% | 3% | 3% | 4% | **3%** | | | | | | | | |
| | COG Change Winter 15-16 vs. Winter 14-15 | | **$ Change** | -$26.36 | -$44.94 | -$56.09 | -$43.54 | -$36.33 | $1.59 | **-$205.68** | | | | | | | | |
| | | | **% Change** | -22% | -24% | -22% | -18% | -18% | 1% | **-18%** | | | | | | | | |
| | LDAC Change Winter 15-16 vs. Winter 14-15 | | **$ Change** | -$1.61 | -$2.75 | -$3.85 | -$3.90 | -$3.25 | -$2.21 | **-$17.57** | | | | | | | | |
| | | | **% Change** | -1% | -1% | -2% | -2% | -2% | -2% | **-2%** | | | | | | | | |

| 27 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | | Typical Usage: therms | | 59 | 100 | 140 | 142 | 118 | 80 | 639 | 49 | 25 | 16 | 14 | 15 | 25 | 144 | 783 |
| 29 | **Winter 2014 - 2015** | | | | | | | | | | | | | | | | | |
| 30 | Customer Charge | units @ | $ 20.01 | $20.01 | $20.01 | $20.01 | $20.01 | $20.01 | $20.01 | $120.06 | | | | | | | | |
| 31 | First | 50 units @ | $0.5844 | $29.22 | $29.22 | $29.22 | $29.22 | $29.22 | $29.22 | $175.32 | | | | | | | | |
| 32 | Over | 50 units @ | $0.4780 | $4.11 | $23.84 | $43.06 | $43.81 | $32.60 | $14.56 | $161.98 | | | | | | | | |
| 33 | | COG 1 | $1.1069 | $64.86 | | | | | | $64.86 | | | | | | | | |
| 34 | | COG 2 | $1.1069 | | $110.56 | | | | | $110.56 | | | | | | | | |
| 35 | | COG 3 | $1.0574 | | | $148.12 | | | | $148.12 | | | | | | | | |
| 36 | | COG 4 | $0.9644 | | | | $136.60 | | | $136.60 | | | | | | | | |
| 37 | | COG 5 | $0.9644 | | | | | $113.99 | | $113.99 | | | | | | | | |
| 38 | | COG 6 | $0.6373 | | | | | | $51.28 | $51.28 | | | | | | | | |
| 39 | Winter Period 14-15 Weighted Avg. COG | | $0.9789 | | | | | | | | | | | | | | | |
| 40 | | LDAC | $ 0.0649 | $3.80 | $6.48 | $9.09 | $9.19 | $7.67 | $5.22 | $41.46 | | | | | | | | |
| 41 | **Summer 2014** | | | | | | | | | | | | | | | | | |
| 42 | Customer Charge | units @ | $ 20.01 | | | | | | | | $20.01 | $20.01 | $20.01 | $20.01 | $20.01 | $20.01 | $120.06 | |
| 43 | First | 50 units @ | $0.5104 | | | | | | | | $24.84 | $12.57 | $8.33 | $7.23 | $7.83 | $12.86 | $73.66 | |
| 44 | Over | 50 units @ | $0.5104 | | | | | | | | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | |
| 45 | | COG 1 | $0.6833 | | | | | | | | $33.25 | | | | | | $33.25 | |
| 46 | | COG 2 | $0.6833 | | | | | | | | | $16.83 | | | | | $16.83 | |
| 47 | | COG 3 | $0.6153 | | | | | | | | | | $10.05 | | | | $10.05 | |
| 48 | | COG 4 | $0.6153 | | | | | | | | | | | $8.71 | | | $8.71 | |
| 49 | | COG 5 | $0.6153 | | | | | | | | | | | | $9.44 | | $9.44 | |
| 50 | | COG 6 | $0.6153 | | | | | | | | | | | | | $15.50 | $15.50 | |
| 51 | Summer Period 2014 Wighted Avg. COG | | $0.6498 | | | | | | | | | | | | | | | |
| 52 | | LDAC | $ 0.0692 | | | | | | | | $3.37 | $1.70 | $1.13 | $0.98 | $1.06 | $1.74 | $9.99 | |
| 53 | | | **TOTAL** | $122.01 | $190.11 | $249.49 | $238.83 | $203.49 | $120.30 | **$1,124.23** | $81.47 | $51.11 | $39.52 | $36.93 | $38.34 | $50.12 | $297.49 | $1,421.72 |
| 54 | | | **Change** | ($24.37) | ($42.75) | ($53.70) | ($41.15) | ($34.06) | $3.68 | **($192.35)** | ($15.66) | ($7.26) | ($4.16) | ($3.43) | ($3.83) | ($7.16) | **($41.50)** | ($233.85) |
| 55 | | | **% Chg** | -19.98% | -22.48% | -21.53% | -17.23% | -16.74% | 3.06% | **-17.11%** | -19.23% | -14.20% | -10.53% | -9.29% | -9.99% | -14.28% | **-13.95%** | -16.45% |

# NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

## Typical G-40 Commercial & Industrial Bill - 2,044 therms/year

## Comparison of Winter 2015-2016 vs. Winter 2014-2015

| 1 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | Typical Usage: therms | | 143 | 267 | 397 | 406 | 337 | 204 | 1,754 | 112 | 47 | 29 | 25 | 28 | 48 | 290 | 2,044 |
| 3 | **Winter 2015 - 2016** | | | | | | | | | | | | | | | | | |
| 4 | Customer Charge | units @ | $ 67.45 | $67.45 | $67.45 | $67.45 | $67.45 | $67.45 | $67.45 | $404.70 | | | | | | | | |
| 5 | First | 75 units @ | $0.1615 | $12.11 | $12.11 | $12.11 | $12.11 | $12.11 | $12.11 | $72.68 | | | | | | | | |
| 6 | Over | 75 units @ | $0.1615 | $11.02 | $31.01 | $51.93 | $53.44 | $42.34 | $20.86 | $210.61 | | | | | | | | |
| 7 | | COG 1 | $0.6616 | $94.78 | | | | | | $78.07 | | | | | | | | |
| 8 | | COG 2 | $0.6616 | | $176.66 | | | | | $176.66 | | | | | | | | |
| 9 | | COG 3 | $0.6616 | | | $262.36 | | | | $262.36 | | | | | | | | |
| 10 | | COG 4 | $0.6616 | | | | $268.53 | | | $268.53 | | | | | | | | |
| 11 | | COG 5 | $0.6616 | | | | | $223.09 | | $223.09 | | | | | | | | |
| 12 | | COG 6 | $0.6616 | | | | | | $135.08 | $135.08 | | | | | | | | |
| 13 | | LDAC | $0.0223 | $3.19 | $5.95 | $8.84 | $9.05 | $7.52 | $4.55 | $39.12 | | | | | | | | |
| 14 | **Summer 2015** | | | | | | | | | | | | | | | | | |
| 15 | Customer Charge | units @ | $ 67.45 | | | | | | | | $ 67.45 | $67.45 | $67.45 | $67.45 | $ 67.45 | $67.45 | $404.70 | |
| 16 | First | 75 units @ | $0.1615 | | | | | | | | $12.11 | $7.66 | $4.72 | $4.08 | $4.57 | $7.71 | $40.85 | |
| 17 | Over | 75 units @ | $0.1615 | | | | | | | | $5.98 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $5.98 | |
| 18 | | COG 1 | $0.3238 | | | | | | | | $36.28 | | | | | | $36.28 | |
| 19 | | COG 2 | $0.3238 | | | | | | | | | $15.36 | | | | | $15.36 | |
| 20 | | COG 3 | $0.2678 | | | | | | | | | | $7.83 | | | | $7.83 | |
| 21 | | COG 4 | $0.2678 | | | | | | | | | | | $6.76 | | | $6.76 | |
| 22 | | COG 5 | $0.2678 | | | | | | | | | | | | $7.58 | | $7.58 | |
| 23 | | COG 6 | $0.2678 | | | | | | | | | | | | | $12.79 | $12.79 | |
| 24 | Summer Period 2015 Weighted Avg. COG | | $0.2986 | | | | | | | | | | | | | | | |
| 25 | | LDAC | $ 0.0446 | | | | | | | | $5.00 | $2.12 | $1.30 | $1.13 | $1.26 | $2.13 | $12.93 | |
| 26 | | | **TOTAL** | $188.56 | $293.19 | $402.69 | $410.58 | $352.51 | $240.05 | **$1,870.87** | $126.82 | $92.58 | $81.30 | $79.41 | $80.87 | $90.08 | $551.06 | $2,421.93 |

| 27 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | | Typical Usage: therms | | 143 | 267 | 397 | 406 | 337 | 204 | 1,754 | 112 | 47 | 29 | 25 | 28 | 48 | 290 | 2,044 |
| 29 | **Winter 2014 - 2015** | | | | | | | | | | | | | | | | | |
| 30 | Customer Charge | units @ | $ 63.18 | $63.18 | $63.18 | $63.18 | $63.18 | $63.18 | $63.18 | $379.08 | | | | | | | | |
| 31 | First | 75 units @ | $0.1513 | $11.35 | $11.35 | $11.35 | $11.35 | $11.35 | $11.35 | $68.09 | | | | | | | | |
| 32 | Over | 75 units @ | $0.1513 | $10.33 | $29.05 | $48.65 | $50.06 | $39.67 | $19.54 | $197.31 | | | | | | | | |
| 33 | | COG 1 | $1.1217 | $160.70 | | | | | | $160.70 | | | | | | | | |
| 34 | | COG 2 | $1.1217 | | $299.51 | | | | | $299.51 | | | | | | | | |
| 35 | | COG 3 | $1.0722 | | | $425.18 | | | | $425.18 | | | | | | | | |
| 36 | | COG 4 | $0.9792 | | | | $397.44 | | | $397.44 | | | | | | | | |
| 37 | | COG 5 | $0.9792 | | | | | $330.18 | | $330.18 | | | | | | | | |
| 38 | | COG 6 | $0.6521 | | | | | | $133.14 | $133.14 | | | | | | | | |
| 39 | Winter Period 14-15 Weighted Avg. COG | | $0.9955 | | | | | | | | | | | | | | | |
| 40 | | LDAC | $ 0.0437 | $6.26 | $11.67 | $17.33 | $17.74 | $14.74 | $8.92 | $76.65 | | | | | | | | |
| 41 | **Summer 2014** | | | | | | | | | | | | | | | | | |
| 42 | Customer Charge | units @ | $ 63.18 | | | | | | | | $63.18 | $63.18 | $63.18 | $63.18 | $63.18 | $63.18 | $379.08 | |
| 43 | First | 75 units @ | $0.1513 | | | | | | | | $11.35 | $7.18 | $4.42 | $3.82 | $4.28 | $7.23 | $38.27 | |
| 44 | Over | 75 units @ | $0.1513 | | | | | | | | $5.60 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $5.60 | |
| 45 | | COG 1 | $0.7209 | | | | | | | | $80.76 | | | | | | $80.76 | |
| 46 | | COG 2 | $0.7209 | | | | | | | | | $34.19 | | | | | $34.19 | |
| 47 | | COG 3 | $0.6529 | | | | | | | | | | $19.08 | | | | $19.08 | |
| 48 | | COG 4 | $0.6529 | | | | | | | | | | | $16.48 | | | $16.48 | |
| 49 | | COG 5 | $0.6529 | | | | | | | | | | | | $18.48 | | $18.48 | |
| 50 | | COG 6 | $0.6529 | | | | | | | | | | | | | $31.18 | $31.18 | |
| 51 | Summer Period 2014 Wighted Avg. COG | | $0.6903 | | | | | | | | | | | | | | | |
| 52 | | LDAC | $ 0.0430 | | | | | | | | $4.82 | $2.04 | $1.26 | $1.09 | $1.22 | $2.05 | $12.47 | |
| 53 | | | **TOTAL** | $251.81 | $414.76 | $565.69 | $539.76 | $459.11 | $236.13 | **$2,467.26** | $165.71 | $106.58 | $87.94 | $84.56 | $87.16 | $103.64 | $635.60 | $3,102.87 |
| 54 | | | **Change** | ($63.25) | ####### | ($163.00) | ($129.18) | ($106.60) | $3.92 | **($596.39)** | ($38.90) | ($14.00) | ($6.64) | ($5.15) | ($6.30) | ($13.56) | **($84.55)** | ($680.94) |
| 55 | | | **% Chg** | -25.12% | -29.31% | -28.81% | -23.93% | -23.22% | 1.66% | **-24.17%** | -23.47% | -13.14% | -7.55% | -6.09% | -7.23% | -13.08% | **-13.30%** | -21.95% |

# NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

## Typical G-41 Commercial & Industrial Bill - 22,598 therms/year

## Comparison of Winter 2015-2016 vs. Winter 2014-2015

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
| 2 | | Typical Usage: therms | | 1,789 | 2,850 | 4,234 | 4,007 | 3,552 | 2,318 | 18,750 | 1,392 | 666 | 410 | 336 | 389 | 655 | 3,849 | 22,598 |
| 3 | **Winter 2015 - 2016** | | | | | | | | | | | | | | | | | |
| 4 | Customer Charge | units @ | $ 196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $1,180.38 | | | | | | | | |
| 5 | All | units @ | $0.2098 | $375.40 | $597.87 | $888.26 | $840.77 | $745.16 | $486.23 | $3,933.67 | | | | | | | | |
| 6 | | COG 1 | $0.6616 | $1,183.81 | | | | | | $1,183.81 | | | | | | | | |
| 7 | | COG 2 | $0.6616 | | $1,885.37 | | | | | $1,885.37 | | | | | | | | |
| 8 | | COG 3 | $0.6616 | | | $2,801.10 | | | | $2,801.10 | | | | | | | | |
| 9 | | COG 4 | $0.6616 | | | | $2,651.34 | | | $2,651.34 | | | | | | | | |
| 10 | | COG 5 | $0.6616 | | | | | $2,349.83 | | $2,349.83 | | | | | | | | |
| 11 | | COG 6 | $0.6616 | | | | | | $1,533.31 | $1,533.31 | | | | | | | | |
| 12 | | LDAC | $0.0223 | $39.90 | $63.55 | $94.41 | $89.37 | $79.20 | $51.68 | $418.12 | | | | | | | | |
| 13 | **Summer 2015** | | | | | | | | | | | | | | | | | |
| 14 | Customer Charge | units @ | $ 196.73 | | | | | | | | $ 196.73 | $196.73 | $196.73 | $196.73 | $ 196.73 | $196.73 | $1,180.38 | |
| 15 | All | units @ | $0.1622 | | | | | | | | $225.78 | $108.06 | $66.47 | $54.55 | $63.11 | $106.30 | $624.28 | |
| ## | | COG 1 | $0.3297 | | | | | | | | $458.94 | | | | | | $458.94 | |
| ## | | COG 2 | $0.3297 | | | | | | | | | $219.65 | | | | | $219.65 | |
| ## | | COG 3 | $0.2737 | | | | | | | | | | $112.16 | | | | $112.16 | |
| ## | | COG 4 | $0.2737 | | | | | | | | | | | $92.05 | | | $92.05 | |
| ## | | COG 5 | $0.2737 | | | | | | | | | | | | $106.50 | | $106.50 | |
| ## | | COG 6 | $0.2737 | | | | | | | | | | | | | $179.38 | $179.38 | |
| ## | Summer Period 2015 Weighted Avg. COG | | $0.3036 | | | | | | | | | | | | | | | |
| ## | | LDAC | $ 0.0234 | | | | | | | | $32.57 | $15.59 | $9.59 | $7.87 | $9.11 | $15.34 | $90.06 | |
| ## | | **TOTAL** | | $1,795.84 | $2,743.52 | $3,980.50 | $3,778.20 | $3,370.92 | $2,267.95 | **$17,936.93** | $914.03 | $540.04 | $384.95 | $351.19 | $375.45 | $497.75 | $3,063.41 | $21,000.34 |
| 26 | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
| 27 | | Typical Usage: therms | | 1,789 | 2,850 | 4,234 | 4,007 | 3,552 | 2,318 | 18,750 | 1,392 | 666 | 410 | 336 | 389 | 655 | 3,849 | 22,598 |
| 28 | **Winter 2014 - 2015** | | | | | | | | | | | | | | | | | |
| 29 | Customer Charge | units @ | $ 184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $1,105.56 | | | | | | | | |
| 30 | All | units @ | $0.1965 | $351.60 | $559.97 | $831.95 | $787.47 | $697.92 | $455.40 | $3,684.30 | | | | | | | | |
| 31 | | COG 1 | $1.1217 | $2,007.08 | | | | | | $2,007.08 | | | | | | | | |
| 32 | | COG 2 | $1.1217 | | $3,196.52 | | | | | $3,196.52 | | | | | | | | |
| 33 | | COG 3 | $1.0722 | | | $4,539.51 | | | | $4,539.51 | | | | | | | | |
| 34 | | COG 4 | $0.9792 | | | | $3,924.11 | | | $3,924.11 | | | | | | | | |
| 35 | | COG 5 | $0.9792 | | | | | $3,477.87 | | $3,477.87 | | | | | | | | |
| 36 | | COG 6 | $0.6521 | | | | | | $1,511.29 | $1,511.29 | | | | | | | | |
| 37 | Winter Period 14-15 Weighted Avg. COG | | $0.9950 | | | | | | | | | | | | | | | |
| 38 | | LDAC | $ 0.0437 | $78.19 | $124.53 | $185.02 | $175.13 | $155.21 | $101.28 | $819.36 | | | | | | | | |
| 39 | **Summer 2014** | | | | | | | | | | | | | | | | | |
| 40 | Customer Charge | units @ | $ 184.26 | | | | | | | | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $1,105.56 | |
| 41 | All | units @ | $0.1519 | | | | | | | | $211.45 | $101.20 | | | | | $312.64 | |
| 42 | | COG 1 | $0.7209 | | | | | | | | $1,003.50 | | | | | | $1,003.50 | |
| 43 | | COG 2 | $0.7209 | | | | | | | | | $480.28 | | | | | $480.28 | |
| 44 | | COG 3 | $0.6529 | | | | | | | | | | $267.56 | | | | $267.56 | |
| 45 | | COG 4 | $0.6529 | | | | | | | | | | | $219.57 | | | $219.57 | |
| 46 | | COG 5 | $0.6529 | | | | | | | | | | | | $254.05 | | $254.05 | |
| 47 | | COG 6 | $0.6529 | | | | | | | | | | | | | $427.90 | $427.90 | |
| 48 | Summer Period 2014 Wighted Avg. COG | | $0.6893 | | | | | | | | | | | | | | | |
| 49 | | LDAC | $ 0.0430 | | | | | | | | $59.86 | $28.65 | $17.62 | $14.46 | $16.73 | $28.18 | $165.50 | |
| 50 | | **TOTAL** | | $2,621.13 | $4,065.28 | $5,740.73 | $5,070.96 | $4,515.25 | $2,252.23 | **$24,265.59** | $1,459.06 | $794.39 | $469.44 | $418.29 | $455.05 | $640.34 | $4,236.57 | $28,502.16 |
| 51 | | **Change** | | ($825.29) | ($1,321.76) | ($1,760.23) | ($1,292.76) | ($1,144.33) | $15.71 | **($6,328.66)** | ($545.03) | ($254.35) | ($84.49) | ($67.10) | ($79.59) | ($142.59) | **($1,173.16)** | ($7,501.82) |
| 52 | | **% Chg** | | -31.49% | -32.51% | -30.66% | -25.49% | -25.34% | 0.70% | **-26.08%** | -37.35% | -32.02% | -18.00% | -16.04% | -17.49% | -22.27% | **-27.69%** | -26.32% |

# NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

**Typical G-51 Commercial & Industrial Bill - 20,134 therms/year**
**Comparison of Winter 2015-2016 vs. Winter 2014-2015**

| | | | | Nov | Dec | Jan | Feb | Mar | Apr | Winter | May | June | July | August | Sept | October | Summer | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **Winter** | **May** | **June** | **July** | **August** | **Sept** | **October** | **Summer** | **Annual** |
| 2 | | Typical Usage: therms | | 1,657 | 1,826 | 2,278 | 2,323 | 2,131 | 1,739 | 11,955 | 1,591 | 1,351 | 1,291 | 1,270 | 1,263 | 1,414 | 8,179 | 20,134 |
| 3 | **Winter 2015 - 2016** | | | | | | | | | | | | | | | | | |
| 4 | Customer Charge | units @ | $ 196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $196.73 | $1,180.38 | | | | | | | | |
| 5 | First | 1,300 units @ | $0.1520 | $197.60 | $197.60 | $197.60 | $197.60 | $197.60 | $197.60 | $1,185.60 | | | | | | | | |
| 6 | Over | 1,300 units @ | $0.1238 | $44.19 | $65.18 | $121.09 | $126.68 | $102.83 | $54.36 | $514.33 | | | | | | | | |
| 7 | | COG 1 | $0.6462 | $1,070.73 | | | | | | $1,070.73 | | | | | | | | |
| 8 | | COG 2 | $0.6462 | | $1,180.27 | | | | | $1,180.27 | | | | | | | | |
| 9 | | COG 3 | $0.6462 | | | $1,472.13 | | | | $1,472.13 | | | | | | | | |
| 10 | | COG 4 | $0.6462 | | | | $1,501.32 | | | $1,501.32 | | | | | | | | |
| 11 | | COG 5 | $0.6462 | | | | | $1,376.80 | | $1,376.80 | | | | | | | | |
| 12 | | COG 6 | $0.6462 | | | | | | $1,123.79 | $1,123.79 | | | | | | | | |
| 13 | | LDAC | $0.0223 | $36.95 | $40.73 | $50.80 | $51.81 | $47.51 | $38.78 | $266.59 | | | | | | | | |
| 14 | **Summer 2015** | | | | | | | | | | | | | | | | | |
| 15 | Customer Charge | units @ | $ 196.73 | | | | | | | | $ 196.73 | $196.73 | $196.73 | $196.73 | $ 196.73 | $196.73 | $1,180.38 | |
| 16 | First | 1,000 units @ | $0.1183 | | | | | | | | $118.30 | $118.30 | $118.30 | $118.30 | $118.30 | $118.30 | $709.80 | |
| 17 | Over | 1,000 units @ | $0.0958 | | | | | | | | $56.58 | $33.60 | $27.92 | $25.82 | $25.18 | $39.69 | $208.79 | |
| 18 | | COG 1 | $0.2612 | | | | | | | | $415.47 | | | | | | $415.47 | |
| 19 | | COG 2 | $0.2612 | | | | | | | | | $352.81 | | | | | $352.81 | |
| 20 | | COG 3 | $0.2052 | | | | | | | | | | $265.00 | | | | $265.00 | |
| 21 | | COG 4 | $0.2052 | | | | | | | | | | | $260.51 | | | $260.51 | |
| 22 | | COG 5 | $0.2052 | | | | | | | | | | | | $259.13 | | $259.13 | |
| 23 | | COG 6 | $0.2052 | | | | | | | | | | | | | $290.21 | $290.21 | |
| 24 | Summer Period 2015 Weighted Avg. COG | | $0.2253 | | | | | | | | | | | | | | | |
| 25 | | LDAC | $ 0.0234 | | | | | | | | $37.22 | $31.61 | $30.22 | $29.71 | $29.55 | $33.09 | $191.40 | |
| 26 | | **TOTAL** | | $1,546.20 | $1,680.51 | $2,038.35 | $2,074.14 | $1,921.47 | $1,611.25 | **$10,871.93** | $824.31 | $733.04 | $638.17 | $631.07 | $628.89 | $678.02 | $4,133.51 | $15,005.44 |
| 27 | | | | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **Winter** | **May** | **June** | **July** | **August** | **Sept** | **October** | **Summer** | **Annual** |
| 28 | | Typical Usage: therms | | 1,657 | 1,826 | 2,278 | 2,323 | 2,131 | 1,739 | 11,955 | 1,591 | 1,351 | 1,291 | 1,270 | 1,263 | 1,414 | 8,179 | 20,134 |
| 29 | **Winter 2014 - 2015** | | | | | | | | | | | | | | | | | |
| 30 | Customer Charge | units @ | $ 184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $1,105.56 | | | | | | | | |
| 31 | First | 1,300 units @ | $0.1424 | $185.12 | $185.12 | $185.12 | $185.12 | $185.12 | $185.12 | $1,110.72 | | | | | | | | |
| 32 | Over | 1,300 units @ | $0.1160 | $41.41 | $61.07 | $113.46 | $118.70 | $96.35 | $50.93 | $481.93 | | | | | | | | |
| 33 | | COG 1 | $1.0063 | $1,667.41 | | | | | | $1,667.41 | | | | | | | | |
| 34 | | COG 2 | $1.0063 | | $1,837.99 | | | | | $1,837.99 | | | | | | | | |
| 35 | | COG 3 | $0.9568 | | | $2,179.72 | | | | $2,179.72 | | | | | | | | |
| 36 | | COG 4 | $0.8638 | | | | $2,006.87 | | | $2,006.87 | | | | | | | | |
| 37 | | COG 5 | $0.8638 | | | | | $1,840.42 | | $1,840.42 | | | | | | | | |
| 38 | | COG 6 | $0.5367 | | | | | | $933.36 | $933.36 | | | | | | | | |
| 39 | Winter Period 14-15 Weighted Avg. COG | | $0.8755 | | | | | | | | | | | | | | | |
| 40 | | LDAC | $ 0.0437 | $72.41 | $79.82 | $99.55 | $101.53 | $93.11 | $76.00 | $522.41 | | | | | | | | |
| 41 | **Summer 2014** | | | | | | | | | | | | | | | | | |
| 42 | Customer Charge | units @ | $ 184.26 | | | | | | | | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $184.26 | $1,105.56 | |
| 43 | First | 1,000 units @ | $0.1108 | | | | | | | | $110.80 | $110.80 | $110.80 | $110.80 | $110.80 | $110.80 | $664.80 | |
| 44 | Over | 1,000 units @ | $0.0897 | | | | | | | | $52.98 | $31.46 | $26.14 | $24.18 | $23.57 | $37.16 | $195.50 | |
| 45 | | COG 1 | $0.6318 | | | | | | | | $1,004.96 | | | | | | $1,004.96 | |
| 46 | | COG 2 | $0.6318 | | | | | | | | | $853.39 | | | | | $853.39 | |
| 47 | | COG 3 | $0.5638 | | | | | | | | | | $728.11 | | | | $728.11 | |
| 48 | | COG 4 | $0.5638 | | | | | | | | | | | $715.78 | | | $715.78 | |
| 49 | | COG 5 | $0.5638 | | | | | | | | | | | | $711.98 | | $711.98 | |
| 50 | | COG 6 | $0.5638 | | | | | | | | | | | | | $797.37 | $797.37 | |
| 51 | Summer Period 2014 Wighted Avg. COG | | $0.5883 | | | | | | | | | | | | | | | |
| 52 | | LDAC | $ 0.0430 | | | | | | | | $68.40 | $58.08 | $55.53 | $54.59 | $54.30 | $60.81 | $351.72 | |
| 53 | | **TOTAL** | | $2,150.60 | $2,348.25 | $2,762.11 | $2,596.48 | $2,399.26 | $1,429.67 | **$13,686.38** | $1,421.40 | $1,237.99 | $1,104.84 | $1,089.61 | $1,084.91 | $1,190.41 | $7,129.15 | $20,815.53 |
| 54 | | **Change** | | ($604.40) | ($667.74) | ($723.76) | ($522.34) | ($477.79) | $181.59 | **($2,814.44)** | ($597.09) | ($504.94) | ($466.67) | ($458.53) | ($456.02) | ($512.38) | **($2,995.64)** | ($5,810.09) |
| 55 | | **% Chg** | | -28.10% | -28.44% | -26.20% | -20.12% | -19.91% | 12.70% | **-20.56%** | -42.01% | -40.79% | -42.24% | -42.08% | -42.03% | -43.04% | **-42.02%** | -27.91% |

# NORTHERN UTILITIES, INC. -- NEW HAMPSHIRE DIVISION

## Impact of Rate Changes on Residential Heating Bills by Usage Level

## Forecast Winter 2015-2016 vs. Actual Winter 2014-2015

**Residential Heating**

| | Winter 2014-2015 | Winter 2015- 2016 |
|---|---|---|
| Customer Charge | $20.01 | $21.36 |
| First 50 Therms | $0.5844 | $0.6239 |
| Over 50 therms | $0.4780 | $0.5103 |
| LDAC | $0.0649 | $0.0374 |
| CGA | $0.9789 | $0.6570 |

| | Usage (Therms) | Winter 2014-2015 Bill Amount | Winter 2015-2016 Bill Amount | Total Bill | | Base Rate | | CGA | | LDAC | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | $28.15 | $27.95 | ($0.20) | -0.7% | $0.20 | 0.7% | ($1.61) | -5.7% | ($0.14) | -0.5% |
| | 10 | $36.29 | $34.54 | ($1.75) | -4.8% | $0.40 | 1.1% | ($3.22) | -8.9% | ($0.28) | -0.8% |
| | 20 | $52.57 | $47.73 | ($4.85) | -9.2% | $0.79 | 1.5% | ($6.44) | -12.2% | ($0.55) | -1.0% |
| | 25 | $60.72 | $54.32 | ($6.40) | -10.5% | $0.99 | 1.6% | ($8.05) | -13.3% | ($0.69) | -1.1% |
| | 30 | $68.86 | $60.91 | ($7.95) | -11.5% | $1.19 | 1.7% | ($9.66) | -14.0% | ($0.83) | -1.2% |
| | 45 | $93.28 | $80.68 | ($12.60) | -13.5% | $1.78 | 1.9% | ($14.49) | -15.5% | ($1.24) | -1.3% |
| | 50 | $101.42 | $87.28 | ($14.15) | -13.9% | $1.98 | 2.0% | ($16.10) | -15.9% | ($1.38) | -1.4% |
| | 75 | $139.47 | $117.39 | ($22.08) | -15.8% | $2.97 | 2.1% | ($24.15) | -17.3% | ($2.06) | -1.5% |
| Average Monthly | 125 | $215.56 | $177.63 | ($37.93) | -17.6% | $4.94 | 2.3% | ($40.24) | -18.7% | ($3.44) | -1.6% |
| | 150 | $253.61 | $207.75 | ($45.86) | -18.1% | $5.93 | 2.3% | ($48.29) | -19.0% | ($4.13) | -1.6% |
| | 200 | $329.70 | $267.98 | ($61.72) | -18.7% | $7.91 | 2.4% | ($64.39) | -19.5% | ($5.50) | -1.7% |

**Schedule 9**

Northern Utilities New Hampshire Division
Period Covered: November 1, 2015 - April 30, 2016
Variance Analysis

| | | 2014-15 Winter (6 months actual) | | | Forecast Winter 2015-16 (6 months proposed) | | | Variance | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Therm Sales | 35,764,140 | | | 33,294,125 | | | (2,470,015) | | |
| 2 3 4 | | THERM SENDOUT | COSTS | EFFECT ON COST OF GAS | THERM SENDOUT | COSTS | EFFECT ON COST OF GAS | THERM SENDOUT | COSTS | EFFECT ON COST OF GAS |
| 5 | | | | | | | | | | |
| 6 | Demand Charges | | $ 16,114,295 | $ 0.4506 | | 8,547,711 | $ 0.2567 | | $ (7,566,584) | $ (0.1938) |
| 7 | | | | | | | | | | |
| 8 | Purchased Gas | | 23,701,538 | 0.6627 | | 14,488,622 | 0.4352 | | $ (9,212,916) | $ (0.2275) |
| 9 | | | | | | | | | | |
| 10 | Storage & Peaking Gas | | 3,892,942 | 0.1089 | | 3,129,201 | 0.0940 | | $ (763,741) | $ (0.0149) |
| 11 | | | | | | | | | | |
| 12 | Capacity Release & Asset Management | | (6,007,336) | $ (0.1804) | | $ (3,401,720) | $ (0.1022) | | $ (2,605,616) | $ 0.0783 |
| 13 | | | | | | | | | | |
| 14 | Hedging (Gain)/Loss | | - | - | | 83,993 | 0.0025 | | 83,993 | $ 0.0025 |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | Total Volumes and Cost | | $ 37,701,439 | $ 1.0542 | $ - | $ 22,847,808 | $ 0.6862 | $ - | $ (14,853,631) | $ (0.3679) |
| 18 | | | | | | | | | | |
| 19 | Prior Period Balance | | ($3,607,559) | $ (0.1009) | | $ (2,001,586) | $ (0.0601) | | $ 1,605,973 | $ 0.0408 |
| 20 | | | | | | $ - | $ - | | $ - | $ - |
| 21 | Interest | | $ (56,962) | $ (0.0016) | | 3,131 | $ 0.0001 | | 60,093 | $ 0.0017 |
| 22 | Refunds from Suppliers | | - | $ - | | - | $ - | | - | $ - |
| 23 | Off-system Sales | | (2,463,102) | $ (0.0689) | | - | $ - | | 2,463,102 | $ 0.0689 |
| 24 | Prior Period Adjustment | | | | | | | | | |
| 25 | Interruptible Revenues | | | | | - | $ - | | - | $ - |
| 26 | Working Capital Allowance | | 29,730 | $ 0.0008 | | 15,279 | $ 0.0005 | | (14,451) | $ (0.0004) |
| 27 | Bad Debt Allowance | | 310,739 | $ 0.0087 | | $ 188,896 | $ 0.0057 | | (121,843) | $ (0.0030) |
| 28 | Fuel Inventory Financing | | 4,568 | $ 0.0001 | | 3,483 | $ 0.0001 | | (1,085) | $ (0.0000) |
| 29 | Local Production and Storage | | 416,811 | $ 0.0117 | | 420,658 | $ 0.0126 | | 3,847 | $ 0.0010 |
| 30 | Misc Overhead | | 420,658 | $ 0.0118 | | 394,798 | $ 0.0119 | | (25,860) | $ 0.0001 |
| 31 | | | | | | | | | | |
| 32 | Total Anticipated Indirect Cost of Gas | | ($4,945,116) | $ (0.1383) | | (975,341) | $ (0.0293) | | 3,969,775 | $ 0.1090 |
| 33 | Total Adjusted Cost | | 32,756,323 | $ 0.9159 | | 21,872,467 | $ 0.6570 | | (10,883,856) | $ (0.2589) |

## Schedules 10A, 10B & Attachments, & 10C

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Demand Costs to Customer Classes

### Base Capacity Costs

| 1 | **BASE SENDOUT BY CLASS** | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | **Total Therms** | | | | | | | | | |
| 3 | Res Heat | 415,423 | 429,270 | 429,270 | 401,575 | 429,270 | 415,423 | 5,059,834 | 2,520,230 | Schedule 10B, LN 52 |
| 4 | Res General | 13,840 | 14,301 | 14,301 | 13,379 | 14,301 | 13,840 | 168,571 | 83,963 | Schedule 10B, LN 53 |
| 5 | G50 Low Annual-Low Winter | 75,826 | 78,354 | 78,354 | 73,298 | 78,354 | 75,826 | 923,558 | 460,011 | Schedule 10B, LN 54 |
| 6 | G40 Low Annual-High Winter | 146,833 | 151,728 | 151,728 | 141,939 | 151,728 | 146,833 | 1,788,425 | 890,788 | Schedule 10B, LN 55 |
| 7 | G51 Med Annual-Low Winter | 148,205 | 153,145 | 153,145 | 143,264 | 153,145 | 124,165 | 1,781,088 | 875,068 | Schedule 10B, LN 56 |
| 8 | G41 Med Annual-High Winter | 185,402 | 191,582 | 191,582 | 179,222 | 191,582 | 185,402 | 2,258,186 | 1,124,770 | Schedule 10B, LN 57 |
| 9 | G52 High Annual-Low Winter | 133,003 | 195,931 | 212,981 | 199,241 | 159,410 | 93,950 | 2,254,535 | 994,516 | Schedule 10B, LN 58 |
| 10 | G42 High Annual-High Winter | 37,814 | 39,075 | 39,075 | 36,554 | 39,075 | 37,814 | 460,577 | 229,407 | Schedule 10B, LN 59 |
| 11 | Total Firm Sales | 1,156,345 | 1,253,385 | 1,270,435 | 1,188,471 | 1,216,864 | 1,093,252 | 14,694,774 | 7,178,752 | Sum LN 3 : LN 10 |
| 12 | | | | | | | | | | |
| 13 | **% of Total** | | | | | | | | | |
| 14 | Res Heat | 35.93% | 34.25% | 33.79% | 33.79% | 35.28% | 38.00% | | | LN 3 / LN 11 |
| 15 | Res General | 1.20% | 1.14% | 1.13% | 1.13% | 1.18% | 1.27% | | | LN 4 / LN 11 |
| 16 | G50 Low Annual-Low Winter | 6.56% | 6.25% | 6.17% | 6.17% | 6.44% | 6.94% | | | LN 5 / LN 11 |
| 17 | G40 Low Annual-High Winter | 12.70% | 12.11% | 11.94% | 11.94% | 12.47% | 13.43% | | | LN 6 / LN 11 |
| 18 | G51 Med Annual-Low Winter | 12.82% | 12.22% | 12.05% | 12.05% | 12.59% | 11.36% | | | LN 7 / LN 11 |
| 19 | G41 Med Annual-High Winter | 16.03% | 15.29% | 15.08% | 15.08% | 15.74% | 16.96% | | | LN 8 / LN 11 |
| 20 | G52 High Annual-Low Winter | 11.50% | 15.63% | 16.76% | 16.76% | 13.10% | 8.59% | | | LN 9 / LN 11 |
| 21 | G42 High Annual-High Winter | 3.27% | 3.12% | 3.08% | 3.08% | 3.21% | 3.46% | | | LN 10 / LN 11 |
| 22 | Total Firm Sales | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | | | LN 11 / LN 11 |
| 23 | | | | | | | | | | |
| 24 | **PIPELINE BASE DEMAND COSTS** | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 25 | TOTAL PIPELINE BASE DEMAND COST | $ 68,267 | $ 68,267 | $ 68,267 | $ 68,267 | $ 68,267 | $ 68,267 | $ 819,203 | $ 409,602 | Schedule 1A, LN 69 + Schedule 1A, LN 80 |
| 26 | Res Heat | $ 24,525 | $ 23,381 | $ 23,067 | $ 23,067 | $ 24,082 | $ 25,941 | $ 282,464 | $ 144,063 | LN 25 * LN 14 |
| 27 | Res General | $ 817 | $ 779 | $ 768 | $ 768 | $ 802 | $ 864 | $ 9,410 | $ 4,800 | LN 25 * LN 15 |
| 28 | G50 Low Annual-Low Winter | $ 4,477 | $ 4,268 | $ 4,210 | $ 4,210 | $ 4,396 | $ 4,735 | $ 51,557 | $ 26,295 | LN 25 * LN 16 |
| 29 | G40 Low Annual-High Winter | $ 8,669 | $ 8,264 | $ 8,153 | $ 8,153 | $ 8,512 | $ 9,169 | $ 99,838 | $ 50,920 | LN 25 * LN 17 |
| 30 | G51 Med Annual-Low Winter | $ 8,750 | $ 8,341 | $ 8,229 | $ 8,229 | $ 8,592 | $ 7,753 | $ 99,270 | $ 49,894 | LN 25 * LN 18 |
| 31 | G41 Med Annual-High Winter | $ 10,946 | $ 10,435 | $ 10,295 | $ 10,295 | $ 10,748 | $ 11,577 | $ 126,063 | $ 64,295 | LN 25 * LN 19 |
| 32 | G52 High Annual-Low Winter | $ 7,852 | $ 10,672 | $ 11,445 | $ 11,445 | $ 8,943 | $ 5,867 | $ 124,890 | $ 56,222 | LN 25 * LN 20 |
| 33 | G42 High Annual-High Winter | $ 2,232 | $ 2,128 | $ 2,100 | $ 2,100 | $ 2,192 | $ 2,361 | $ 25,712 | $ 13,113 | LN 25 * LN 21 |
| 34 | | | | | | | | | | |
| 35 | Residential | $ 25,342 | $ 24,160 | $ 23,835 | $ 23,835 | $ 24,885 | $ 26,805 | $ 291,874 | $ 148,862 | LN 26 + LN 27 |
| 36 | SALES HLF CLASSES | $ 21,078 | $ 23,280 | $ 23,884 | $ 23,884 | $ 21,930 | $ 18,355 | $ 275,717 | $ 132,412 | LN 28 + LN 30 + LN 32 |
| 37 | SALES LLF CLASSES | $ 21,847 | $ 20,827 | $ 20,547 | $ 20,547 | $ 21,452 | $ 23,107 | $ 251,612 | $ 128,328 | LN 29 + LN 31 + LN 33 |
| 38 | | | | | | | | | | |

## Remaining Capacity Costs

| LN | | Column A<br>Design Day Demand (MMBtu) | Column B<br>Avg Daily Base Use Load (MMBtu) | Column C<br>Remaining Design Day Demand (MMBtu) | Column D<br>% of Total Remaining Design Day Demand | |
|---|---|---|---|---|---|---|
| 39 | | | | | | |
| 40 | Res Heat | 20,025 | 1,370 | 18,655 | 46.65% | Company Analysis |
| 41 | Res General | 294 | 46 | 248 | 0.62% | Company Analysis |
| 42 | G50 Low Annual-Low Winter | 975 | 250 | 725 | 1.81% | Company Analysis |
| 43 | G40 Low Annual-High Winter | 10,749 | 484 | 10,265 | 25.67% | Company Analysis |
| 44 | G51 Med Annual-Low Winter | 1,466 | 489 | 977 | 2.44% | Company Analysis |
| 45 | G41 Med Annual-High Winter | 7,777 | 612 | 7,165 | 17.92% | Company Analysis |
| 46 | G52 High Annual-Low Winter | 848 | 680 | 168 | 0.42% | Company Analysis |
| 47 | G42 High Annual-High Winter | 1,909 | 125 | 1,784 | 4.46% | Company Analysis |
| 48 | TOTAL | 44,043 | 4,056 | 39,987 | 100.00% | Sum LN 40 : LN 47 |
| 49 | | | | | | |

| LN | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter | |
|---|---|---|---|---|---|---|---|---|---|---|
| 50 | **REMAINING PIPELINE DEMAND** | | | | | | | | | |
| 51 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 52 | NH DIVISION TOTAL - REMAINING PIPELINE | $ 168,028 | $ 357,797 | $ 828,344 | $ 425,787 | $ 232,951 | $ 89,495 | $ 2,203,052 | $ 2,102,403 | Schedule 1A, LN 70 |
| 53 | | | | | | | | | | |
| 54 | Res Heat | $ 78,387 | $ 166,917 | $ 386,434 | $ 198,636 | $ 108,675 | $ 41,751 | $ 1,027,754 | $ 980,799 | LN 40 Col D * LN 52 |
| 55 | Res General | $ 1,044 | $ 2,222 | $ 5,145 | $ 2,644 | $ 1,447 | $ 556 | $ 13,682 | $ 13,057 | LN 41 Col D * LN 52 |
| 56 | G50 Low Annual-Low Winter | $ 3,046 | $ 6,486 | $ 15,016 | $ 7,718 | $ 4,223 | $ 1,622 | $ 39,936 | $ 38,111 | LN 42 Col D * LN 52 |
| 57 | G40 Low Annual-High Winter | $ 43,132 | $ 91,846 | $ 212,634 | $ 109,298 | $ 59,798 | $ 22,973 | $ 565,518 | $ 539,681 | LN 43 Col D * LN 52 |
| 58 | G51 Med Annual-Low Winter | $ 4,106 | $ 8,743 | $ 20,241 | $ 10,404 | $ 5,692 | $ 2,187 | $ 53,832 | $ 51,373 | LN 44 Col D * LN 52 |
| 59 | G41 Med Annual-High Winter | $ 30,109 | $ 64,114 | $ 148,433 | $ 76,298 | $ 41,743 | $ 16,037 | $ 394,769 | $ 376,734 | LN 45 Col D * LN 52 |
| 60 | G52 High Annual-Low Winter | $ 706 | $ 1,504 | $ 3,482 | $ 1,790 | $ 979 | $ 376 | $ 9,260 | $ 8,837 | LN 46 Col D * LN 52 |
| 61 | G42 High Annual-High Winter | $ 7,498 | $ 15,965 | $ 36,961 | $ 18,999 | $ 10,394 | $ 3,993 | $ 98,302 | $ 93,811 | LN 47 Col D * LN 52 |
| 62 | TOTAL | $ 168,028 | $ 357,797 | $ 828,344 | $ 425,787 | $ 232,951 | $ 89,495 | $ 2,203,052 | $ 2,102,403 | Sum LN 54 : LN 61 |
| 63 | | | | | | | | | | |
| 64 | Residential | $ 79,431 | $ 169,139 | $ 391,578 | $ 201,280 | $ 110,122 | $ 42,306 | $ 1,041,436 | $ 993,856 | LN 54 + LN 55 |
| 65 | SALES HLF CLASSES | $ 7,858 | $ 16,733 | $ 38,738 | $ 19,912 | $ 10,894 | $ 4,185 | $ 103,028 | $ 98,321 | LN 56 + LN 58 + LN 60 |
| 66 | SALES LLF CLASSES | $ 80,739 | $ 171,925 | $ 398,028 | $ 204,595 | $ 111,935 | $ 43,003 | $ 1,058,589 | $ 1,010,225 | LN 57 + LN 59 + LN 61 |
| 67 | | | | | | | | | | |
| 68 | **PEAKING AND STORAGE DEMAND** | | | | | | | | | |
| 69 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 70 | NH DIVISION TOTAL - PEAKING & STORAGE | $ 482,384 | $ 1,027,187 | $ 2,378,061 | $ 1,222,376 | $ 668,770 | $ 256,928 | $ 6,324,658 | $ 6,035,707 | Schedule 1A, LN 73 + Schedule 1A, LN 79 |
| 71 | | | | | | | | | | |
| 72 | Res Heat | $ 225,039 | $ 479,197 | $ 1,109,398 | $ 570,255 | $ 311,990 | $ 119,860 | $ 2,950,539 | $ 2,815,739 | LN 40 Col D * LN 70 |
| 73 | Res General | $ 2,996 | $ 6,379 | $ 14,769 | $ 7,592 | $ 4,153 | $ 1,596 | $ 39,280 | $ 37,485 | LN 41 Col D * LN 70 |
| 74 | G50 Low Annual-Low Winter | $ 8,744 | $ 18,620 | $ 43,108 | $ 22,158 | $ 12,123 | $ 4,657 | $ 114,649 | $ 109,411 | LN 42 Col D * LN 70 |
| 75 | G40 Low Annual-High Winter | $ 123,827 | $ 263,676 | $ 610,442 | $ 313,781 | $ 171,671 | $ 65,953 | $ 1,623,523 | $ 1,549,350 | LN 43 Col D * LN 70 |
| 76 | G51 Med Annual-Low Winter | $ 11,787 | $ 25,100 | $ 58,109 | $ 29,869 | $ 16,342 | $ 6,278 | $ 154,545 | $ 147,484 | LN 44 Col D * LN 70 |
| 77 | G41 Med Annual-High Winter | $ 86,439 | $ 184,064 | $ 426,129 | $ 219,040 | $ 119,838 | $ 46,039 | $ 1,133,328 | $ 1,081,550 | LN 45 Col D * LN 70 |
| 78 | G52 High Annual-Low Winter | $ 2,028 | $ 4,318 | $ 9,996 | $ 5,138 | $ 2,811 | $ 1,080 | $ 26,584 | $ 25,370 | LN 46 Col D * LN 70 |
| 79 | G42 High Annual-High Winter | $ 21,524 | $ 45,834 | $ 106,111 | $ 54,543 | $ 29,841 | $ 11,464 | $ 282,210 | $ 269,317 | LN 47 Col D * LN 70 |
| 80 | TOTAL | $ 482,384 | $ 1,027,187 | $ 2,378,061 | $ 1,222,376 | $ 668,770 | $ 256,928 | $ 6,324,658 | $ 6,035,707 | Sum LN 72 : LN 79 |
| 81 | | | | | | | | | | |
| 82 | Residential | $ 228,035 | $ 485,576 | $ 1,124,167 | $ 577,847 | $ 316,144 | $ 121,456 | $ 2,989,819 | $ 2,853,224 | LN 72 + LN 73 |
| 83 | SALES HLF CLASSES | $ 22,559 | $ 48,037 | $ 111,212 | $ 57,166 | $ 31,276 | $ 12,015 | $ 295,778 | $ 282,265 | LN 74 + LN 76 + LN 78 |
| 84 | SALES LLF CLASSES | $ 231,790 | $ 493,574 | $ 1,142,682 | $ 587,364 | $ 321,351 | $ 123,456 | $ 3,039,061 | $ 2,900,217 | LN 75 + LN 77 + LN 79 |
| 85 | | | | | | | | | | |

86 **CAPACITY RELEASE MARGINS & ASSET MANAGEMENT CREDIT BY CLASS**

| LN | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter | |
|---|---|---|---|---|---|---|---|---|---|---|
| 87 | | | | | | | | | | |
| 88 | NH DIVISION - MONTHLY CAP. RELEASE | $ (285,353) | $ (578,375) | $ (1,304,943) | $ (683,358) | $ (385,600) | $ (164,091) | $ (3,401,720) | $ (3,401,720) | Schedule 1A, LN 76 |
| 89 | | | | | | | | | | |
| 90 | Res Heat | $ (133,121) | $ (269,820) | $ (608,774) | $ (318,796) | $ (179,888) | $ (76,551) | $ (1,586,948) | $ (1,586,948) | LN 40 Col D * LN 88 |
| 91 | Res General | $ (1,772) | $ (3,592) | $ (8,104) | $ (4,244) | $ (2,395) | $ (1,019) | $ (21,127) | $ (21,127) | LN 41 Col D * LN 88 |
| 92 | G50 Low Annual-Low Winter | $ (5,173) | $ (10,484) | $ (23,655) | $ (12,387) | $ (6,990) | $ (2,975) | $ (61,664) | $ (61,664) | LN 42 Col D * LN 88 |
| 93 | G40 Low Annual-High Winter | $ (73,249) | $ (148,467) | $ (334,976) | $ (175,416) | $ (98,983) | $ (42,122) | $ (873,213) | $ (873,213) | LN 43 Col D * LN 88 |
| 94 | G51 Med Annual-Low Winter | $ (6,973) | $ (14,133) | $ (31,887) | $ (16,698) | $ (9,422) | $ (4,010) | $ (83,122) | $ (83,122) | LN 44 Col D * LN 88 |
| 95 | G41 Med Annual-High Winter | $ (51,133) | $ (103,640) | $ (233,835) | $ (122,452) | $ (69,096) | $ (29,404) | $ (609,561) | $ (609,561) | LN 45 Col D * LN 88 |
| 96 | G52 High Annual-Low Winter | $ (1,199) | $ (2,431) | $ (5,485) | $ (2,872) | $ (1,621) | $ (690) | $ (14,298) | $ (14,298) | LN 46 Col D * LN 88 |
| 97 | G42 High Annual-High Winter | $ (12,733) | $ (25,807) | $ (58,227) | $ (30,492) | $ (17,206) | $ (7,322) | $ (151,787) | $ (151,787) | LN 47 Col D * LN 88 |
| 98 | TOTAL | $ (285,353) | $ (578,375) | $ (1,304,943) | $ (683,358) | $ (385,600) | $ (164,091) | $ (3,401,720) | $ (3,401,720) | Sum LN 90 : LN 97 |
| 99 | | | | | | | | | | |
| 100 | Residential | $ (134,893) | $ (273,412) | $ (616,878) | $ (323,040) | $ (182,283) | $ (77,570) | $ (1,608,075) | $ (1,608,075) | LN 90 + LN 91 |
| 101 | SALES HLF CLASSES | $ (13,345) | $ (27,048) | $ (61,027) | $ (31,958) | $ (18,033) | $ (7,674) | $ (159,085) | $ (159,085) | LN 92 + LN 94 + LN 96 |
| 102 | SALES LLF CLASSES | $ (137,115) | $ (277,915) | $ (627,038) | $ (328,360) | $ (185,285) | $ (78,847) | $ (1,634,560) | $ (1,634,560) | LN 93 + LN 95 + LN 97 |

103

104 **INTERRUPTIBLE MARGINS BY CLASS**

| LN | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter | |
|---|---|---|---|---|---|---|---|---|---|---|
| 105 | | | | | | | | | | |
| 106 | NH DIVISION - MONTHLY INTERR MARGINS | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | Schedule 1A, LN 77 |
| 107 | | | | | | | | | | |
| 108 | Res Heat | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 40 Col D * LN 106 |
| 109 | Res General | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 41 Col D * LN 106 |
| 110 | G50 Low Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 42 Col D * LN 106 |
| 111 | G40 Low Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 43 Col D * LN 106 |
| 112 | G51 Med Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 44 Col D * LN 106 |
| 113 | G41 Med Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 45 Col D * LN 106 |
| 114 | G52 High Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 46 Col D * LN 106 |
| 115 | G42 High Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 47 Col D * LN 106 |
| 116 | TOTAL | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | Sum LN 108 : LN 115 |
| 117 | | | | | | | | | | |
| 118 | Residential | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 108 + LN 109 |
| 119 | SALES HLF CLASSES | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 110 + LN 112 + LN 114 |
| 120 | SALES LLF CLASSES | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 111 + LN 113 + LN 115 |

121

| LN | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter | |
|---|---|---|---|---|---|---|---|---|---|---|
| 122 | **REMAINING RE-ENTRY FEE CREDIT** | | | | | | | | | |
| 123 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 124 | NH DIVISION - RE-ENTRY FEE CREDITS | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | Schedule 1A, LN 78 |
| 125 | | | | | | | | | | |
| 126 | Res Heat | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 40 Col D * LN 124 |
| 127 | Res General | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 41 Col D * LN 124 |
| 128 | G50 Low Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 42 Col D * LN 124 |
| 129 | G40 Low Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 43 Col D * LN 124 |
| 130 | G51 Med Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 44 Col D * LN 124 |
| 131 | G41 Med Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 45 Col D * LN 124 |
| 132 | G52 High Annual-Low Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 46 Col D * LN 124 |
| 133 | G42 High Annual-High Winter | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 47 Col D * LN 124 |
| 134 | TOTAL | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | Sum LN 126 : LN 133 |
| 135 | | | | | | | | | | |
| 136 | Residential | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 126 + LN 127 |
| 137 | SALES HLF CLASSES | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 128 + LN 130 + LN 132 |
| 138 | SALES LLF CLASSES | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | LN 129 + LN 131 + LN 133 |
| 139 | | | | | | | | | | |
| 140 | **TOTAL NON-BASE CAPACITY COSTS** | | | | | | | | | |
| 141 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 142 | Res Heat | $ 170,305 | $ 376,294 | $ 887,058 | $ 450,095 | $ 240,777 | $ 85,060 | $ 2,391,344 | $ 2,209,590 | Sum of Ln 54, 72, 90, 108, 126 |
| 143 | Res General | $ 2,267 | $ 5,010 | $ 11,809 | $ 5,992 | $ 3,205 | $ 1,132 | $ 31,835 | $ 29,416 | Sum of Ln 55, 73, 91, 109, 127 |
| 144 | G50 Low Annual-Low Winter | $ 6,618 | $ 14,622 | $ 34,469 | $ 17,489 | $ 9,356 | $ 3,305 | $ 92,921 | $ 85,858 | Sum of Ln 56, 74, 92, 110, 128 |
| 145 | G40 Low Annual-High Winter | $ 93,710 | $ 207,055 | $ 488,100 | $ 247,663 | $ 132,487 | $ 46,804 | $ 1,315,828 | $ 1,215,819 | Sum of Ln 57, 75, 93, 111, 129 |
| 146 | G51 Med Annual-Low Winter | $ 8,920 | $ 19,710 | $ 46,463 | $ 23,575 | $ 12,612 | $ 4,455 | $ 125,255 | $ 115,735 | Sum of Ln 58, 76, 94, 112, 130 |
| 147 | G41 Med Annual-High Winter | $ 65,416 | $ 144,538 | $ 340,727 | $ 172,885 | $ 92,485 | $ 32,672 | $ 918,536 | $ 848,723 | Sum of Ln 59, 77, 95, 113, 131 |
| 148 | G52 High Annual-Low Winter | $ 1,534 | $ 3,390 | $ 7,992 | $ 4,055 | $ 2,169 | $ 766 | $ 21,546 | $ 19,908 | Sum of Ln 60, 78, 96, 114, 132 |
| 149 | G42 High Annual-High Winter | $ 16,289 | $ 35,991 | $ 84,844 | $ 43,050 | $ 23,030 | $ 8,136 | $ 228,725 | $ 211,341 | Sum of Ln 61, 79, 97, 115, 133 |
| 150 | TOTAL | $ 365,059 | $ 806,609 | $ 1,901,462 | $ 964,806 | $ 516,121 | $ 182,332 | $ 5,125,991 | $ 4,736,390 | Sum LN 142 : LN 149 |
| 151 | | | | | | | | | | |
| 152 | Residential | $ 172,572 | $ 381,304 | $ 898,867 | $ 456,087 | $ 243,983 | $ 86,193 | $ 2,423,180 | $ 2,239,006 | LN 142 + LN 143 |
| 153 | SALES HLF CLASSES | $ 17,072 | $ 37,722 | $ 88,924 | $ 45,120 | $ 24,137 | $ 8,527 | $ 239,722 | $ 221,502 | LN 144 + LN 146 + LN 148 |
| 154 | SALES LLF CLASSES | $ 175,415 | $ 387,584 | $ 913,672 | $ 463,599 | $ 248,001 | $ 87,612 | $ 2,463,090 | $ 2,275,882 | LN 145 + LN 147 + LN 149 |
| 155 | | | | | | | | | | |
| 156 | **TOTAL CAPACITY COSTS** | | | | | | | | | |
| 157 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** | |
| 158 | Res Heat | $ 194,830 | $ 399,675 | $ 910,125 | $ 473,162 | $ 264,860 | $ 111,001 | $ 2,673,808 | $ 2,353,652 | LN 142 + LN 26 |
| 159 | Res General | $ 3,084 | $ 5,788 | $ 12,578 | $ 6,760 | $ 4,008 | $ 1,997 | $ 41,246 | $ 34,215 | LN 143 + LN 27 |
| 160 | G50 Low Annual-Low Winter | $ 11,094 | $ 18,889 | $ 38,679 | $ 21,700 | $ 13,752 | $ 8,040 | $ 144,478 | $ 112,154 | LN 144 + LN 28 |
| 161 | G40 Low Annual-High Winter | $ 102,378 | $ 215,319 | $ 496,253 | $ 255,816 | $ 140,999 | $ 55,973 | $ 1,415,667 | $ 1,266,738 | LN 145 + LN 29 |
| 162 | G51 Med Annual-Low Winter | $ 17,670 | $ 28,051 | $ 54,692 | $ 31,805 | $ 21,203 | $ 12,209 | $ 224,525 | $ 165,629 | LN 146 + LN 30 |
| 163 | G41 Med Annual-High Winter | $ 76,361 | $ 154,973 | $ 351,021 | $ 183,180 | $ 103,233 | $ 44,250 | $ 1,044,599 | $ 913,017 | LN 147 + LN 31 |
| 164 | G52 High Annual-Low Winter | $ 9,386 | $ 14,062 | $ 19,437 | $ 15,500 | $ 11,112 | $ 6,633 | $ 146,436 | $ 76,131 | LN 148 + LN 32 |
| 165 | G42 High Annual-High Winter | $ 18,522 | $ 38,120 | $ 86,944 | $ 45,150 | $ 25,222 | $ 10,497 | $ 254,437 | $ 224,454 | LN 149 + LN 33 |
| 166 | TOTAL | $ 433,326 | $ 874,876 | $ 1,969,729 | $ 1,033,073 | $ 584,388 | $ 250,599 | $ 5,945,194 | $ 5,145,991 | Sum LN 158 : LN 165 |
| 167 | | | | | | | | | | |
| 168 | Residential | $ 197,915 | $ 405,463 | $ 922,702 | $ 479,922 | $ 268,867 | $ 112,998 | $ 2,715,054 | $ 2,387,868 | LN 158 + LN 159 |
| 169 | SALES HLF CLASSES | $ 38,150 | $ 61,002 | $ 112,808 | $ 69,004 | $ 46,067 | $ 26,882 | $ 515,438 | $ 353,913 | LN 160 + LN 162 + LN 164 |
| 170 | SALES LLF CLASSES | $ 197,261 | $ 408,411 | $ 934,219 | $ 484,146 | $ 269,453 | $ 110,720 | $ 2,714,702 | $ 2,404,210 | LN 161 + LN 163 + LN 165 |
| 171 | | | | | | | | | | |
| 172 | % ALLOCATION BETWEEN SALES HLF AND LLF | | | | | | | | | |
| 173 | SALES HLF CLASSES | | | | | | | | 12.83% | LN 169 / ( LN169 + LN 170) |
| 174 | SALES LLF CLASSES | | | | | | | | 87.17% | LN 170 / ( LN 169 + LN 170) |

## Northern Utilities - NEW HAMPSHIRE DIVISION

**13438.39675 13969.68024** 1370.403849

## 2015 - 2016 Period

1,370.40

| Line No. | Forecasted Normal Sales By Class- Therms<br>Calendar Month Firm Sales Volumes<br>Normal Winter | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Res Heat | 1,894,881 | 2,791,565 | 3,524,244 | 2,946,169 | 2,271,130 | 1,338,393 | 688,654 | 458,665 | 416,590 | 433,060 | 474,097 | 887,660 | 18,125,108 | 14,766,381 |
| 2 | Res General | 27,066 | 39,873 | 50,339 | 42,082 | 32,440 | 19,117 | 22,943 | 15,281 | 13,879 | 14,428 | 15,795 | 29,573 | 322,814 | 210,916 |
| 3 | **Total Residential** | **1,921,947** | **2,831,438** | **3,574,582** | **2,988,250** | **2,303,570** | **1,357,510** | **711,597** | **473,945** | **430,469** | **447,488** | **489,892** | **917,233** | **18,447,921** | **14,977,297** |
| 4 | G50 Low Annual-Low Winter | 110,064 | 162,148 | 204,705 | 171,128 | 131,918 | 77,740 | 125,698 | 83,719 | 76,039 | 79,045 | 86,536 | 162,022 | 1,470,764 | 857,704 |
| 5 | G40 Low Annual-High Winter | 945,721 | 1,393,250 | 1,758,925 | 1,470,411 | 1,133,505 | 667,982 | 243,408 | 162,117 | 147,246 | 153,067 | 167,572 | 313,748 | 8,556,954 | 7,369,794 |
| 6 | G51 Med Annual-Low Winter | 174,012 | 256,356 | 323,640 | 270,554 | 208,564 | 122,908 | 245,682 | 163,631 | 148,621 | 154,497 | 169,137 | 316,678 | 2,554,281 | 1,356,034 |
| 7 | G41 Med Annual-High Winter | 824,236 | 1,214,275 | 1,532,976 | 1,281,525 | 987,897 | 582,175 | 307,344 | 204,700 | 185,923 | 193,273 | 211,588 | 396,160 | 7,922,072 | 6,423,084 |
| 8 | G52 High Annual-Low Winter | 131,666 | 193,973 | 244,883 | 204,715 | 157,810 | 92,999 | 341,674 | 227,565 | 206,690 | 214,862 | 235,222 | 440,411 | 2,692,471 | 1,026,046 |
| 9 | G42 High Annual-High Winter | 164,789 | 242,770 | 306,488 | 256,215 | 197,510 | 116,394 | 62,685 | 41,750 | 37,921 | 39,420 | 43,155 | 80,800 | 1,589,897 | 1,284,166 |
| 10 | **Total C&I** | **2,350,488** | **3,462,772** | **4,371,617** | **3,654,549** | **2,817,203** | **1,660,198** | **1,326,492** | **883,484** | **802,440** | **834,164** | **913,211** | **1,709,819** | **24,786,438** | **18,316,828** |
| 11 | **Total Sales** | **4,272,435** | **6,294,210** | **7,946,200** | **6,642,799** | **5,120,773** | **3,017,709** | **2,038,088** | **1,357,429** | **1,232,909** | **1,281,652** | **1,403,103** | **2,627,052** | **43,234,360** | **33,294,125** |
| 12 | | | | | | | | | | | | | | | |
| 13 | Residential Heat & Non Heat | 1,921,947 | 2,831,438 | 3,574,582 | 2,988,250 | 2,303,570 | 1,357,510 | 711,597 | 473,945 | 430,469 | 447,488 | 489,892 | 917,233 | 18,447,921 | 14,977,297 |
| 14 | SALES HLF CLASSES | 415,742 | 612,477 | 773,229 | 646,397 | 498,292 | 293,647 | 713,054 | 474,916 | 431,351 | 448,404 | 490,895 | 919,111 | 6,717,516 | 3,239,784 |
| 15 | SALES LLF CLASSES | 1,934,746 | 2,850,295 | 3,598,389 | 3,008,152 | 2,318,911 | 1,366,551 | 613,438 | 408,568 | 371,089 | 385,760 | 422,315 | 790,708 | 18,068,923 | 15,077,044 |
| 16 | **Total Firm Sales** | **4,272,435** | **6,294,210** | **7,946,200** | **6,642,799** | **5,120,773** | **3,017,709** | **2,038,088** | **1,357,429** | **1,232,909** | **1,281,652** | **1,403,103** | **2,627,052** | **43,234,360** | **33,294,125** |
| 17 | | | | | | | | | | | | | | | |
| 18 | **ESTIMATED SENDOUT BY CLASS - Therms** | | | | | | | | | | | | | | |
| 19 | Calendar Month Sendout Volumes (Includes Loss & Unaccounted For) | | | | | | | | | | | | | | |
| 20 | Normal Winter | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **May-16** | **Jun-16** | **Jul-16** | **Aug-16** | **Sep-16** | **Oct-16** | **Annual** | **Winter** |
| 21 | Res Heat | 1,914,114 | 2,819,754 | 3,559,765 | 2,975,906 | 2,294,156 | 1,352,081 | 695,740 | 463,456 | 420,949 | 437,591 | 479,043 | 896,749 | 18,309,304 | 14,915,776 |
| 22 | Res General | 27,340 | 40,276 | 50,846 | 42,506 | 32,769 | 19,312 | 23,179 | 15,440 | 14,024 | 14,579 | 15,960 | 29,876 | 326,107 | 213,050 |
| 23 | G50 Low Annual-Low Winter | 111,181 | 163,785 | 206,769 | 172,855 | 133,256 | 78,536 | 126,992 | 84,593 | 76,835 | 79,872 | 87,439 | 163,681 | 1,485,794 | 866,382 |
| 24 | G40 Low Annual-High Winter | 955,320 | 1,407,319 | 1,776,653 | 1,485,253 | 1,144,997 | 674,814 | 245,913 | 163,811 | 148,787 | 154,669 | 169,320 | 316,961 | 8,643,816 | 7,444,356 |
| 25 | G51 Med Annual-Low Winter | 175,778 | 258,945 | 326,902 | 273,285 | 210,678 | 124,165 | 248,210 | 165,341 | 150,176 | 156,113 | 170,902 | 319,921 | 2,580,416 | 1,369,754 |
| 26 | G41 Med Annual-High Winter | 832,602 | 1,226,537 | 1,548,427 | 1,294,461 | 997,912 | 588,128 | 310,506 | 206,839 | 187,868 | 195,295 | 213,795 | 400,216 | 8,002,588 | 6,488,068 |
| 27 | G52 High Annual-Low Winter | 133,003 | 195,931 | 247,351 | 206,782 | 159,410 | 93,950 | 345,190 | 229,943 | 208,853 | 217,110 | 237,676 | 444,920 | 2,720,118 | 1,036,426 |
| 28 | G42 High Annual-High Winter | 166,462 | 245,221 | 309,577 | 258,801 | 199,512 | 117,584 | 63,330 | 42,187 | 38,317 | 39,832 | 43,605 | 81,627 | 1,606,057 | 1,297,158 |
| 29 | **Subtotal** | | | | | | | | | | | | | | |
| 30 | Residential | 1,941,454 | 2,860,030 | 3,610,611 | 3,018,413 | 2,326,924 | 1,371,393 | 718,919 | 478,896 | 434,973 | 452,169 | 495,003 | 926,624 | 18,635,411 | 15,128,826 |
| 31 | SALES HLF CLASSES | 419,962 | 618,662 | 781,022 | 652,922 | 503,344 | 296,650 | 720,391 | 479,877 | 435,864 | 453,095 | 496,016 | 928,522 | 6,786,328 | 3,272,562 |
| 32 | SALES LLF CLASSES | 1,954,384 | 2,879,078 | 3,634,657 | 3,038,515 | 2,342,421 | 1,380,527 | 619,750 | 412,836 | 374,972 | 389,796 | 426,721 | 798,804 | 18,252,461 | 15,229,582 |
| 33 | **Total Firm Sales** | 4,315,800 | 6,357,770 | 8,026,290 | 6,709,850 | 5,172,690 | 3,048,570 | 2,059,060 | 1,371,610 | 1,245,810 | 1,295,060 | 1,417,740 | 2,653,950 | 43,674,200 | 33,630,970 |

# Northern Utilities - NEW HAMPSHIRE DIVISION
## 2015 - 2016 Period

| Line No. | Forecasted Normal Sales By Class- Therms<br>Calendar Month Firm Sales Volumes<br>Firm Sales | |
|---|---|---|
| 1 | Res Heat | Company Analysis |
| 2 | Res General | Company Analysis |
| 3 | **Total Residential** | Sum LN 1 : LN 2 |
| 4 | G50 Low Annual-Low Winter | Company Analysis |
| 5 | G40 Low Annual-High Winter | Company Analysis |
| 6 | G51 Med Annual-Low Winter | Company Analysis |
| 7 | G41 Med Annual-High Winter | Company Analysis |
| 8 | G52 High Annual-Low Winter | Company Analysis |
| 9 | G42 High Annual-High Winter | Company Analysis |
| 10 | **Total C&I** | Sum LN 4 : LN 9 |
| 11 | **Total Sales** | LN 3 + LN 10 |
| 12 | | |
| 13 | Residential Heat & Non Heat | LN 3 |
| 14 | SALES HLF CLASSES | LN 4 + LN 6 + LN 8 |
| 15 | SALES LLF CLASSES | LN 5 + LN 7 + LN 9 |
| 16 | **Total Firm Sales** | Sum LN 13 : LN 15 |
| 17 | | |
| 18 | **ESTIMATED SENDOUT BY CLASS - Therms** | |
| 19 | Calendar Month Sendout Volumes (Includes Loss & Unaccounted For) | |
| 20 | Normal Winter | |
| 21 | Res Heat | LN 1 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 22 | Res General | LN 2 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 23 | G50 Low Annual-Low Winter | LN 4 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 24 | G40 Low Annual-High Winter | LN 5 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 25 | G51 Med Annual-Low Winter | LN 6 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 26 | G41 Med Annual-High Winter | LN 7 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 27 | G52 High Annual-Low Winter | LN 8 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 28 | G42 High Annual-High Winter | LN 9 x Adj factor (Company Use, LAUF, BTU) x 10 |
| 29 | **Subtotal** | |
| 30 | Residential | LN 21 + LN 22 |
| 31 | SALES HLF CLASSES | LN 23 + LN 25 + LN 27 |
| 32 | SALES LLF CLASSES | LN 24 + LN 26 + LN 28 |
| 33 | **Total Firm Sales** | Sum LN 30 : LN 32 |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Sendout by Class - Allocation between Base & Remaining Sendout

| | | |
|---|---|---|
| 34 | | |
| 35 | **DAILY BASE GAS ENTITLEMENT - Therms/day** | |
| 36 | Res Heat | 13,847 |
| 37 | Res General | 461 |
| 38 | G50 Low Annual-Low Winter | 2,528 |
| 39 | G40 Low Annual-High Winter | 4,894 |
| 40 | G51 Med Annual-Low Winter | 4,940 |
| 41 | G41 Med Annual-High Winter | 6,180 |
| 42 | G52 High Annual-Low Winter | 6,870 |
| 43 | G42 High Annual-High Winter | 1,260 |
| 44 | **Subtotal** | |
| 45 | Residential | 14,309 |
| 46 | SALES HLF CLASSES | 14,338 |
| 47 | SALES LLF CLASSES | 12,335 |
| 48 | **Total Firm Sales** | **40,982** |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 | **BASE SENDOUT BY CLASS - Therms** | | | | | | | | | | | | | | |
| 50 | Days per Month | 30 | 31 | 31 | 29 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | | |
| 51 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **May-16** | **Jun-16** | **Jul-16** | **Aug-16** | **Sep-16** | **Oct-16** | **Annual** | **Winter** |
| 52 | Res Heat | 415,423 | 429,270 | 429,270 | 401,575 | 429,270 | 415,423 | 429,270 | 415,423 | 420,949 | 429,270 | 415,423 | 429,270 | 5,059,834 | 2,520,230 |
| 53 | Res General | 13,840 | 14,301 | 14,301 | 13,379 | 14,301 | 13,840 | 14,301 | 13,840 | 14,024 | 14,301 | 13,840 | 14,301 | 168,571 | 83,963 |
| 54 | G50 Low Annual-Low Winter | 75,826 | 78,354 | 78,354 | 73,298 | 78,354 | 75,826 | 78,354 | 75,826 | 76,835 | 78,354 | 75,826 | 78,354 | 923,558 | 460,011 |
| 55 | G40 Low Annual-High Winter | 146,833 | 151,728 | 151,728 | 141,939 | 151,728 | 146,833 | 151,728 | 146,833 | 148,787 | 151,728 | 146,833 | 151,728 | 1,788,425 | 890,788 |
| 56 | G51 Med Annual-Low Winter | 148,205 | 153,145 | 153,145 | 143,264 | 153,145 | 124,165 | 153,145 | 148,205 | 150,176 | 153,145 | 148,205 | 153,145 | 1,781,088 | 875,068 |
| 57 | G41 Med Annual-High Winter | 185,402 | 191,582 | 191,582 | 179,222 | 191,582 | 185,402 | 191,582 | 185,402 | 187,868 | 191,582 | 185,402 | 191,582 | 2,258,186 | 1,124,770 |
| 58 | G52 High Annual-Low Winter | 133,003 | 195,931 | 212,981 | 199,241 | 159,410 | 93,950 | 212,981 | 206,111 | 208,853 | 212,981 | 206,111 | 212,981 | 2,254,535 | 994,516 |
| 59 | G42 High Annual-High Winter | 37,814 | 39,075 | 39,075 | 36,554 | 39,075 | 37,814 | 39,075 | 37,814 | 38,317 | 39,075 | 37,814 | 39,075 | 460,577 | 229,407 |
| 60 | **Subtotal** | | | | | | | | | | | | | | |
| 61 | Residential | 429,263 | 443,571 | 443,571 | 414,954 | 443,571 | 429,263 | 443,571 | 429,263 | 434,973 | 443,571 | 429,263 | 443,571 | 5,228,405 | 2,604,193 |
| 62 | SALES HLF CLASSES | 357,033 | 427,430 | 444,480 | 415,804 | 390,908 | 293,941 | 444,480 | 430,142 | 435,864 | 444,480 | 430,142 | 444,480 | 4,959,181 | 2,329,595 |
| 63 | SALES LLF CLASSES | 370,049 | 382,384 | 382,384 | 357,714 | 382,384 | 370,049 | 382,384 | 370,049 | 374,972 | 382,384 | 370,049 | 382,384 | 4,507,188 | 2,244,965 |
| 64 | **Total Firm Sales** | 1,156,345 | 1,253,385 | 1,270,435 | 1,188,471 | 1,216,864 | 1,093,252 | 1,270,435 | 1,229,453 | 1,245,810 | 1,270,435 | 1,229,453 | 1,270,435 | 14,694,774 | 7,178,752 |
| 65 | | | | | | | | | | | | | | | |
| 66 | **REMAINING SENDOUT BY CLASS - Therms** | | | | | | | | | | | | | | |
| 67 | | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **May-16** | **Jun-16** | **Jul-16** | **Aug-16** | **Sep-16** | **Oct-16** | **Annual** | **Winter** |
| 68 | Res Heat | 1,498,691 | 2,390,484 | 3,130,495 | 2,574,331 | 1,864,886 | 936,658 | 266,470 | 48,034 | - | 8,321 | 63,621 | 467,479 | 13,249,470 | 12,395,546 |
| 69 | Res General | 13,500 | 25,975 | 36,545 | 29,128 | 18,467 | 5,473 | 8,878 | 1,600 | - | 277 | 2,120 | 15,574 | 157,536 | 129,087 |
| 70 | G50 Low Annual-Low Winter | 35,355 | 85,432 | 128,415 | 99,557 | 54,902 | 2,710 | 48,638 | 8,767 | - | 1,519 | 11,613 | 85,328 | 562,235 | 406,371 |
| 71 | G40 Low Annual-High Winter | 808,487 | 1,255,591 | 1,624,925 | 1,343,315 | 993,269 | 527,980 | 94,185 | 16,978 | - | 2,941 | 22,487 | 165,233 | 6,855,392 | 6,553,568 |
| 72 | G51 Med Annual-Low Winter | 27,573 | 105,800 | 173,758 | 130,021 | 57,533 | - | 95,065 | 17,136 | - | 2,968 | 22,697 | 166,776 | 799,328 | 494,686 |
| 73 | G41 Med Annual-High Winter | 647,200 | 1,034,956 | 1,356,846 | 1,115,239 | 806,331 | 402,727 | 118,925 | 21,437 | - | 3,713 | 28,394 | 208,634 | 5,744,401 | 5,363,298 |
| 74 | G52 High Annual-Low Winter | - | - | 34,370 | 7,541 | - | - | 132,209 | 23,832 | - | 4,128 | 31,565 | 231,939 | 465,583 | 41,911 |
| 75 | G42 High Annual-High Winter | 128,648 | 206,147 | 270,502 | 222,247 | 160,438 | 79,770 | 24,256 | 4,372 | - | 757 | 5,791 | 42,553 | 1,145,481 | 1,067,751 |
| 76 | **Subtotal** | | | | | | | | | | | | | | |
| 77 | Residential | 1,512,192 | 2,416,459 | 3,167,040 | 2,603,459 | 1,883,353 | 942,131 | 275,348 | 49,634 | - | 8,598 | 65,740 | 483,053 | 13,407,006 | 12,524,634 |
| 78 | SALES HLF CLASSES | 62,929 | 191,232 | 336,542 | 237,118 | 112,436 | 2,710 | 275,912 | 49,736 | - | 8,615 | 65,875 | 484,042 | 1,827,147 | 942,967 |
| 79 | SALES LLF CLASSES | 1,584,335 | 2,496,694 | 3,252,273 | 2,680,801 | 1,960,037 | 1,010,477 | 237,366 | 42,787 | - | 7,412 | 56,672 | 416,420 | 13,745,273 | 12,984,617 |
| 80 | **Total Firm Sales** | 3,159,455 | 5,104,385 | 6,755,855 | 5,521,379 | 3,955,826 | 1,955,318 | 788,625 | 142,157 | - | 24,625 | 188,287 | 1,383,515 | 28,979,426 | 26,452,218 |

**Northern Utilities - NEW HAMPSHIRE DIVISION**

**Sendout by Class - Allocation between Base & Remaining S Remaining Sendout**

| | | |
|---|---|---|
| 34 | | |
| 35 | DAILY BASE GAS ENTITLEMENT - Therms/day | |
| 36 | Res Heat | Avg (LN 21 Jul : LN 21 Aug) / 31 days |
| 37 | Res General | Avg (LN 22 Jul : LN 22 Aug) / 31 days |
| 38 | G50 Low Annual-Low Winter | Avg (LN 23 Jul : LN 23 Aug) / 31 days |
| 39 | G40 Low Annual-High Winter | Avg (LN 24 Jul : LN 24 Aug) / 31 days |
| 40 | G51 Med Annual-Low Winter | Avg (LN 25 Jul : LN 25 Aug) / 31 days |
| 41 | G41 Med Annual-High Winter | Avg (LN 26 Jul : LN 26 Aug) / 31 days |
| 42 | G52 High Annual-Low Winter | Avg (LN 27 Jul : LN 27 Aug) / 31 days |
| 43 | G42 High Annual-High Winter | Avg (LN 28 Jul : LN 28 Aug) / 31 days |
| 44 | **Subtotal** | |
| 45 | Residential | LN 36 + LN 37 |
| 46 | SALES HLF CLASSES | LN 38 + LN 40 + LN 42 |
| 47 | SALES LLF CLASSES | LN 39 + LN 41 + LN 43 |
| 48 | **Total Firm Sales** | Sum LN 45 : LN 47 |
| 49 | **BASE SENDOUT BY CLASS - Therms** | |
| 50 | Days per Month | |
| 51 | | |
| 52 | Res Heat | MIN( LN 36 * LN 50, LN 21) |
| 53 | Res General | MIN( LN 37 * LN 50, LN 22) |
| 54 | G50 Low Annual-Low Winter | MIN( LN 38 * LN 50, LN 23) |
| 55 | G40 Low Annual-High Winter | MIN( LN 39 * LN 50, LN 24) |
| 56 | G51 Med Annual-Low Winter | MIN( LN 40 * LN 50, LN 25) |
| 57 | G41 Med Annual-High Winter | MIN( LN 41 * LN 50, LN 26) |
| 58 | G52 High Annual-Low Winter | MIN( LN 42 * LN 50, LN 27) |
| 59 | G42 High Annual-High Winter | MIN( LN 43 * LN 50, LN 28) |
| 60 | **Subtotal** | |
| 61 | Residential | LN 52 + LN 53 |
| 62 | SALES HLF CLASSES | LN 54 + LN 56 + LN 58 |
| 63 | SALES LLF CLASSES | LN 55 + LN 57 + LN 59 |
| 64 | **Total Firm Sales** | Sum LN 61 : LN 63 |
| 65 | | |
| 66 | REMAINING SENDOUT BY CLASS - Therms | |
| 67 | | |
| 68 | Res Heat | LN 21 - LN 52 |
| 69 | Res General | LN 22 - LN 53 |
| 70 | G50 Low Annual-Low Winter | LN 23 - LN 54 |
| 71 | G40 Low Annual-High Winter | LN 24 - LN 55 |
| 72 | G51 Med Annual-Low Winter | LN 25 - LN 56 |
| 73 | G41 Med Annual-High Winter | LN 26 - LN 57 |
| 74 | G52 High Annual-Low Winter | LN 27 - LN 58 |
| 75 | G42 High Annual-High Winter | LN 28 - LN 59 |
| 76 | **Subtotal** | |
| 77 | Residential | LN 68 + LN 69 |
| 78 | SALES HLF CLASSES | LN 70 + LN 72 + LN 74 |
| 79 | SALES LLF CLASSES | LN 71 + LN 73 + LN 75 |
| 80 | **Total Firm Sales** | Sum LN 77 : LN 79 |

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

| | Total Division Metered Deliveries (Dth) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015-2016 | 2015-2016 Compared to 2014-2015 | | | | | 2015-2016 Compared to 2013-2014 | | | | |
| | Forecast | 2014-2015 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern | 2013-2014 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (3-5) | Note 4. | (1-5) | (6/5) | Note 5. | (8-10) |
| Nov | 663,212 | 617,458 | 45,754 | 7.4% | 15,054 | 30,700 | 647,370 | 15,842 | 2.4% | 36,200 | -20,358 |
| Dec | 926,979 | 917,213 | 9,766 | 1.1% | 22,224 | -12,458 | 873,633 | 53,346 | 6.1% | 48,518 | 4,829 |
| Jan | 1,172,219 | 1,173,929 | -1,710 | -0.1% | 28,310 | -30,020 | 1,142,123 | 30,096 | 2.6% | 61,786 | -31,691 |
| Feb | 1,188,007 | 1,170,393 | 17,614 | 1.5% | 28,196 | -10,582 | 1,129,162 | 58,846 | 5.2% | 61,256 | -2,411 |
| Mar | 1,041,781 | 1,031,483 | 10,298 | 1.0% | 24,810 | -14,511 | 1,009,416 | 32,365 | 3.2% | 53,204 | -20,839 |
| Apr | 788,408 | 771,819 | 16,590 | 2.1% | 18,565 | -1,975 | 732,697 | 55,711 | 7.6% | 37,758 | 17,954 |
| May | 567,582 | 554,342 | 13,240 | 2.4% | 13,387 | -146 | 529,156 | 38,426 | 7.3% | 26,464 | 11,962 |
| Jun | 447,712 | 437,858 | 9,854 | 2.3% | 10,632 | -777 | 414,423 | 33,289 | 8.0% | 20,813 | 12,476 |
| Jul | 353,738 | 346,555 | 7,183 | 2.1% | 8,449 | -1,266 | 333,540 | 20,198 | 6.1% | 16,832 | 3,366 |
| Aug | 361,107 | 353,831 | 7,276 | 2.1% | 8,617 | -1,341 | 327,519 | 33,588 | 10.3% | 16,488 | 17,100 |
| Sep | 363,906 | 356,476 | 7,430 | 2.1% | 8,619 | -1,189 | 339,140 | 24,766 | 7.3% | 16,864 | 7,902 |
| Oct | 430,326 | 420,866 | 9,461 | 2.2% | 10,054 | -594 | 415,928 | 14,398 | 3.5% | 20,402 | -6,004 |
| Peak | 5,780,607 | 5,682,295 | 98,312 | 1.7% | 137,158 | -38,846 | 5,534,401 | 246,207 | 4.4% | 298,865 | -52,658 |
| Off-Peak | 2,524,372 | 2,469,927 | 54,444 | 2.2% | 59,758 | -5,313 | 2,359,706 | 164,666 | 7.0% | 117,907 | 46,759 |
| Annual | 8,304,979 | 8,152,222 | 152,757 | 1.9% | 196,916 | -44,159 | 7,894,106 | 410,872 | 5.2% | 410,363 | 510 |

Note 1 Company Forecast
Note 2 Pages 2 - 4; Sum of Column 2 of Billed Deliveries table. Actual Data through March 2014 is weather normalized.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Pages 2 - 4; Sum of Column 7 of Billed Deliveries Table. Actual Data provided is weather normalized.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

| | Total Division Meter Counts | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 31,725 | 30,970 | 755 | 2.4% | 30,045 | 1,680 | 5.6% |
| Dec | 31,875 | 31,121 | 754 | 2.4% | 30,198 | 1,677 | 5.6% |
| Jan | 31,937 | 31,185 | 752 | 2.4% | 30,298 | 1,639 | 5.4% |
| Feb | 31,969 | 31,217 | 752 | 2.4% | 30,324 | 1,645 | 5.4% |
| Mar | 31,977 | 31,226 | 751 | 2.4% | 30,376 | 1,601 | 5.3% |
| Apr | 31,976 | 31,225 | 751 | 2.4% | 30,409 | 1,567 | 5.2% |
| May | 31,810 | 31,060 | 750 | 2.4% | 30,295 | 1,515 | 5.0% |
| Jun | 31,725 | 30,973 | 752 | 2.4% | 30,208 | 1,517 | 5.0% |
| Jul | 31,600 | 30,848 | 752 | 2.4% | 30,082 | 1,518 | 5.0% |
| Aug | 31,632 | 30,880 | 752 | 2.4% | 30,116 | 1,516 | 5.0% |
| Sep | 31,857 | 31,105 | 752 | 2.4% | 30,348 | 1,509 | 5.0% |
| Oct | 32,232 | 31,480 | 752 | 2.4% | 30,725 | 1,507 | 4.9% |
| Peak | 31,910 | 31,157 | 753 | 2.4% | 30,275 | 1,635 | 5.4% |
| Off-Peak | 31,809 | 31,058 | 752 | 2.4% | 30,296 | 1,514 | 5.0% |
| Annual | 31,860 | 31,108 | 752 | 2.4% | 30,285 | 1,574 | 5.2% |

Note 1 Company Forecast
Note 2 Actual data through March 2014. Forecast data beginning April 2014. Page 2 - 4; Sum of Column 2 of Meter Counts table.
Note 3 Actual Data. Page 2 - 4; Sum of Column 5 of Meter Counts table.

| | Total Division Use Per Meter | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 20.90 | 19.94 | 0.97 | 4.9% | 21.55 | -0.64 | -3.0% |
| Dec | 29.08 | 29.47 | -0.39 | -1.3% | 28.93 | 0.15 | 0.5% |
| Jan | 36.70 | 37.64 | -0.94 | -2.5% | 37.70 | -0.99 | -2.6% |
| Feb | 37.16 | 37.49 | -0.33 | -0.9% | 37.24 | -0.08 | -0.2% |
| Mar | 32.58 | 33.03 | -0.45 | -1.4% | 33.23 | -0.65 | -2.0% |
| Apr | 24.66 | 24.72 | -0.06 | -0.2% | 24.09 | 0.56 | 2.3% |
| May | 17.84 | 17.85 | 0.00 | 0.0% | 17.47 | 0.38 | 2.2% |
| Jun | 14.11 | 14.14 | -0.02 | -0.2% | 13.72 | 0.39 | 2.9% |
| Jul | 11.19 | 11.23 | -0.04 | -0.4% | 11.09 | 0.11 | 1.0% |
| Aug | 11.42 | 11.46 | -0.04 | -0.4% | 10.88 | 0.54 | 5.0% |
| Sep | 11.42 | 11.46 | -0.04 | -0.3% | 11.18 | 0.25 | 2.2% |
| Oct | 13.35 | 13.37 | -0.02 | -0.1% | 13.54 | -0.19 | -1.4% |
| Peak | 181.15 | 182.37 | -1.22 | -0.7% | 182.80 | -1.65 | -0.9% |
| Off-Peak | 79.36 | 79.53 | -0.17 | -0.2% | 77.89 | 1.48 | 1.9% |
| Annual | 260.67 | 262.07 | -1.39 | -0.5% | 260.66 | -0.17 | -0.1% |

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

| | Residential Non-Heat Metered Deliveries (Dth) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015-2016 | 2015-2016 Compared to 2014-2015 | | | | | 2015-2016 Compared to 2013-2014 | | | | |
| | Forecast | 2014-2015 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern | 2013-2014 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (3-5) | Note 4. | (1-5) | (6/5) | Note 5. | (8-10) |
| Nov | 2,326 | 2,211 | 115 | 5.2% | -20 | 135 | 2,480 | -154 | -6.2% | -138 | -16 |
| Dec | 3,204 | 3,318 | -114 | -3.4% | -30 | -84 | 3,424 | -219 | -6.4% | -201 | -18 |
| Jan | 3,861 | 4,028 | -167 | -4.2% | -37 | -130 | 4,446 | -585 | -13.2% | -277 | -309 |
| Feb | 4,567 | 4,655 | -88 | -1.9% | -42 | -46 | 4,383 | 183 | 4.2% | -245 | 429 |
| Mar | 4,097 | 4,067 | 30 | 0.7% | -37 | 67 | 4,153 | -56 | -1.3% | -252 | 196 |
| Apr | 3,037 | 3,073 | -37 | -1.2% | -27 | -9 | 3,317 | -280 | -8.4% | -186 | -94 |
| May | 2,424 | 2,425 | 0 | 0.0% | -20 | 20 | 2,484 | -60 | -2.4% | -43 | -17 |
| Jun | 1,984 | 1,984 | 0 | 0.0% | -17 | 16 | 2,019 | -35 | -1.8% | -35 | -1 |
| Jul | 1,733 | 1,734 | 0 | 0.0% | -15 | 14 | 1,843 | -110 | -6.0% | -32 | -78 |
| Aug | 1,739 | 1,740 | -1 | -0.1% | -15 | 14 | 1,680 | 59 | 3.5% | -30 | 89 |
| Sep | 1,601 | 1,602 | -1 | -0.1% | -14 | 13 | 1,619 | -18 | -1.1% | -28 | 10 |
| Oct | 1,708 | 1,709 | -1 | -0.1% | -15 | 14 | 1,826 | -118 | -6.4% | -33 | -85 |
| Peak | 21,092 | 21,353 | -261 | -1.2% | -194 | -67 | 22,202 | -1,111 | -5.0% | -1,292 | 181 |
| Off-Peak | 11,190 | 11,194 | -4 | 0.0% | -96 | 92 | 11,471 | -281 | -2.5% | -200 | -81 |
| Annual | 32,281 | 32,547 | -266 | -0.8% | -290 | 24 | 33,673 | -1,392 | -4.1% | -1,269 | -123 |

Note 1 Company Forecast
Note 2 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

| | Total Division Meter Counts | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 1,470 | 1,483 | -13 | -0.9% | 1,556 | -86 | -5.6% |
| Dec | 1,463 | 1,476 | -13 | -0.9% | 1,554 | -91 | -5.9% |
| Jan | 1,454 | 1,467 | -13 | -0.9% | 1,550 | -96 | -6.2% |
| Feb | 1,460 | 1,473 | -13 | -0.9% | 1,546 | -86 | -5.6% |
| Mar | 1,460 | 1,473 | -13 | -0.9% | 1,554 | -94 | -6.1% |
| Apr | 1,493 | 1,506 | -13 | -0.9% | 1,581 | -88 | -5.6% |
| May | 1,597 | 1,611 | -13 | -0.8% | 1,625 | -28 | -1.7% |
| Jun | 1,600 | 1,614 | -13 | -0.8% | 1,628 | -28 | -1.7% |
| Jul | 1,590 | 1,604 | -13 | -0.8% | 1,618 | -28 | -1.7% |
| Aug | 1,526 | 1,540 | -13 | -0.9% | 1,554 | -28 | -1.8% |
| Sep | 1,520 | 1,534 | -13 | -0.9% | 1,547 | -27 | -1.7% |
| Oct | 1,477 | 1,491 | -13 | -0.9% | 1,504 | -27 | -1.8% |
| Peak | 1,466 | 1,480 | -13 | -0.9% | 1,557 | -91 | -5.8% |
| Off-Peak | 1,552 | 1,565 | -13 | -0.9% | 1,579 | -28 | -1.7% |
| Annual | 1,509 | 1,522 | -13 | -0.9% | 1,568 | -59 | -3.8% |

Note 1 Company Forecast
Note 2 Actual data through March 2014. Forecast data beginning April 2014.
Note 3 Actual Data.

| | Total Division Use Per Meter | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 1.58 | 1.49 | 0.09 | 6.2% | 1.59 | -0.01 | -0.7% |
| Dec | 2.19 | 2.25 | -0.06 | -2.5% | 2.20 | -0.01 | -0.6% |
| Jan | 2.66 | 2.75 | -0.09 | -3.3% | 2.87 | -0.21 | -7.4% |
| Feb | 3.13 | 3.16 | -0.03 | -1.0% | 2.84 | 0.29 | 10.4% |
| Mar | 2.81 | 2.76 | 0.05 | 1.7% | 2.67 | 0.13 | 5.0% |
| Apr | 2.03 | 2.04 | -0.01 | -0.3% | 2.10 | -0.06 | -3.0% |
| May | 1.52 | 1.51 | 0.01 | 0.8% | 1.53 | -0.01 | -0.7% |
| Jun | 1.24 | 1.23 | 0.01 | 0.8% | 1.24 | 0.00 | 0.0% |
| Jul | 1.09 | 1.08 | 0.01 | 0.8% | 1.14 | -0.05 | -4.3% |
| Aug | 1.14 | 1.13 | 0.01 | 0.8% | 1.08 | 0.06 | 5.4% |
| Sep | 1.05 | 1.04 | 0.01 | 0.8% | 1.05 | 0.01 | 0.6% |
| Oct | 1.16 | 1.15 | 0.01 | 0.8% | 1.21 | -0.06 | -4.7% |
| Peak | 14.38 | 14.43 | -0.05 | -0.3% | 14.26 | 0.13 | 0.9% |
| Off-Peak | 7.21 | 7.15 | 0.06 | 0.8% | 7.26 | -0.05 | -0.7% |
| Annual | 21.39 | 21.38 | 0.01 | 0.1% | 21.47 | 0.08 | 0.4% |

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

| | Residential Heat Metered Deliveries (Dth) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015-2016 | 2015-2016 Compared to 2014-2015 | | | | | 2015-2016 Compared to 2013-2014 | | | | |
| | Forecast | 2014-2015 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern | 2013-2014 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (3-5) | Note 4. | (1-5) | (6/5) | Note 5. | (8-10) |
| Nov | 135,195 | 123,715 | 11,480 | 9.3% | 3,617 | 7,863 | 128,256 | 6,939 | 5.4% | 9,070 | -2,131 |
| Dec | 234,166 | 233,445 | 721 | 0.3% | 6,791 | -6,070 | 219,834 | 14,332 | 6.5% | 15,389 | -1,056 |
| Jan | 316,654 | 318,013 | -1,359 | -0.4% | 9,232 | -10,592 | 309,201 | 7,452 | 2.4% | 21,344 | -13,892 |
| Feb | 329,964 | 323,782 | 6,182 | 1.9% | 9,392 | -3,209 | 312,968 | 16,997 | 5.4% | 21,569 | -4,572 |
| Mar | 268,858 | 265,687 | 3,171 | 1.2% | 7,702 | -4,531 | 261,606 | 7,252 | 2.8% | 17,715 | -10,463 |
| Apr | 191,802 | 186,982 | 4,820 | 2.6% | 5,413 | -593 | 178,327 | 13,475 | 7.6% | 12,101 | 1,374 |
| May | 112,946 | 108,842 | 4,104 | 3.8% | 3,190 | 914 | 107,292 | 5,655 | 5.3% | 6,480 | -826 |
| Jun | 57,551 | 55,435 | 2,116 | 3.8% | 1,626 | 490 | 54,241 | 3,310 | 6.1% | 3,279 | 31 |
| Jul | 36,473 | 35,135 | 1,338 | 3.8% | 1,032 | 306 | 35,924 | 549 | 1.5% | 2,174 | -1,625 |
| Aug | 34,988 | 33,712 | 1,276 | 3.8% | 986 | 291 | 31,297 | 3,692 | 11.8% | 1,885 | 1,806 |
| Sep | 36,493 | 35,170 | 1,323 | 3.8% | 1,019 | 304 | 34,211 | 2,283 | 6.7% | 2,042 | 240 |
| Oct | 57,421 | 55,355 | 2,066 | 3.7% | 1,585 | 481 | 56,904 | 517 | 0.9% | 3,355 | -2,838 |
| Peak | 1,476,638 | 1,451,623 | 25,015 | 1.7% | 42,147 | -17,132 | 1,410,192 | 66,446 | 4.7% | 97,353 | -30,907 |
| Off-Peak | 335,873 | 323,649 | 12,224 | 3.8% | 9,439 | 2,785 | 319,868 | 16,005 | 5.0% | 19,205 | -3,200 |
| Annual | 1,812,511 | 1,775,272 | 37,239 | 2.1% | 51,586 | -14,347 | 1,730,059 | 82,451 | 4.8% | 111,633 | -29,181 |

Note 1 Company Forecast
Note 2 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

| | Total Division Meter Counts | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 23,435 | 22,769 | 666 | 2.9% | 21,887 | 1,548 | 7.1% |
| Dec | 23,551 | 22,885 | 666 | 2.9% | 22,010 | 1,541 | 7.0% |
| Jan | 23,598 | 22,932 | 666 | 2.9% | 22,074 | 1,524 | 6.9% |
| Feb | 23,618 | 22,952 | 666 | 2.9% | 22,095 | 1,523 | 6.9% |
| Mar | 23,632 | 22,966 | 666 | 2.9% | 22,133 | 1,499 | 6.8% |
| Apr | 23,665 | 22,999 | 666 | 2.9% | 22,161 | 1,504 | 6.8% |
| May | 23,378 | 22,712 | 666 | 2.9% | 22,046 | 1,332 | 6.0% |
| Jun | 23,358 | 22,692 | 666 | 2.9% | 22,026 | 1,332 | 6.0% |
| Jul | 23,334 | 22,668 | 666 | 2.9% | 22,002 | 1,332 | 6.1% |
| Aug | 23,435 | 22,769 | 666 | 2.9% | 22,103 | 1,332 | 6.0% |
| Sep | 23,635 | 22,969 | 666 | 2.9% | 22,303 | 1,332 | 6.0% |
| Oct | 23,915 | 23,249 | 666 | 2.9% | 22,583 | 1,332 | 5.9% |
| Peak | 23,583 | 22,917 | 666 | 2.9% | 22,060 | 1,523 | 6.9% |
| Off-Peak | 23,509 | 22,843 | 666 | 2.9% | 22,177 | 1,332 | 6.0% |
| Annual | 23,546 | 22,880 | 666 | 2.9% | 22,119 | 1,427 | 6.5% |

Note 1 Company Forecast
Note 2 Actual data through March 2014. Forecast data beginning April 2014.
Note 3 Actual Data.

| | Total Division Use Per Meter | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 5.77 | 5.43 | 0.34 | 6.2% | 5.86 | -0.09 | -1.6% |
| Dec | 9.94 | 10.20 | -0.26 | -2.5% | 9.99 | -0.04 | -0.4% |
| Jan | 13.42 | 13.87 | -0.45 | -3.2% | 14.01 | -0.59 | -4.2% |
| Feb | 13.97 | 14.11 | -0.14 | -1.0% | 14.16 | -0.19 | -1.4% |
| Mar | 11.38 | 11.57 | -0.19 | -1.7% | 11.82 | -0.44 | -3.7% |
| Apr | 8.10 | 8.13 | -0.03 | -0.3% | 8.05 | 0.06 | 0.7% |
| May | 4.83 | 4.79 | 0.04 | 0.8% | 4.87 | -0.04 | -0.7% |
| Jun | 2.46 | 2.44 | 0.02 | 0.9% | 2.46 | 0.00 | 0.1% |
| Jul | 1.56 | 1.55 | 0.01 | 0.8% | 1.63 | -0.07 | -4.3% |
| Aug | 1.49 | 1.48 | 0.01 | 0.8% | 1.42 | 0.08 | 5.4% |
| Sep | 1.54 | 1.53 | 0.01 | 0.8% | 1.53 | 0.01 | 0.7% |
| Oct | 2.40 | 2.38 | 0.02 | 0.8% | 2.52 | -0.12 | -4.7% |
| Peak | 62.61 | 63.34 | -0.73 | -1.1% | 63.93 | -1.30 | -2.0% |
| Off-Peak | 14.29 | 14.17 | 0.12 | 0.8% | 14.42 | -0.14 | -0.9% |
| Annual | 76.98 | 77.59 | -0.61 | -0.8% | 78.22 | -1.44 | -1.8% |

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

| | Total Division C&I Metered Deliveries (Dth) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015-2016 | 2015-2016 Compared to 2014-2015 | | | | | 2015-2016 Compared to 2013-2014 | | | | |
| | Forecast | 2014-2015 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern | 2013-2014 Normal | Change | Percent Change | Change Due to Meter Count | Change Due to Load Pattern |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (3-5) | Note 4. | (1-5) | (6/5) | Note 5. | (8-10) |
| Nov | 525,691 | 491,532 | 34,159 | 6.9% | 7,517 | 26,642 | 516,634 | 9,057 | 1.8% | 17,118 | -8,061 |
| Dec | 689,609 | 680,450 | 9,159 | 1.3% | 10,241 | -1,083 | 650,375 | 39,233 | 6.0% | 22,327 | 16,906 |
| Jan | 851,704 | 851,887 | -183 | 0.0% | 12,521 | -12,704 | 828,475 | 23,229 | 2.8% | 26,285 | -3,056 |
| Feb | 853,476 | 841,956 | 11,521 | 1.4% | 12,364 | -844 | 811,811 | 41,665 | 5.1% | 25,357 | 16,309 |
| Mar | 768,827 | 761,729 | 7,098 | 0.9% | 11,082 | -3,985 | 743,657 | 25,170 | 3.4% | 21,873 | 3,296 |
| Apr | 593,570 | 581,764 | 11,806 | 2.0% | 8,548 | 3,258 | 551,054 | 42,517 | 7.7% | 12,542 | 29,974 |
| May | 452,212 | 443,076 | 9,136 | 2.1% | 6,428 | 2,709 | 419,381 | 32,831 | 7.8% | 13,390 | 19,442 |
| Jun | 388,177 | 380,439 | 7,739 | 2.0% | 5,691 | 2,048 | 358,163 | 30,014 | 8.4% | 11,667 | 18,348 |
| Jul | 315,532 | 309,687 | 5,845 | 1.9% | 4,697 | 1,148 | 295,773 | 19,759 | 6.7% | 9,817 | 9,942 |
| Aug | 324,379 | 318,378 | 6,001 | 1.9% | 4,832 | 1,169 | 294,542 | 29,838 | 10.1% | 9,690 | 20,148 |
| Sep | 325,811 | 319,704 | 6,108 | 1.9% | 4,830 | 1,278 | 303,310 | 22,501 | 7.4% | 9,545 | 12,957 |
| Oct | 371,197 | 363,801 | 7,396 | 2.0% | 5,383 | 2,013 | 357,199 | 13,998 | 3.9% | 10,896 | 3,102 |
| Peak | 4,282,877 | 4,209,318 | 73,559 | 1.7% | 62,275 | 11,284 | 4,102,006 | 180,871 | 4.4% | 124,805 | 56,066 |
| Off-Peak | 2,177,309 | 2,135,085 | 42,225 | 2.0% | 31,860 | 10,364 | 2,028,367 | 148,942 | 7.3% | 65,083 | 83,859 |
| Annual | 6,460,186 | 6,344,403 | 115,783 | 1.8% | 94,135 | 21,648 | 6,130,374 | 329,813 | 5.4% | 191,565 | 138,248 |

Note 1 Company Forecast
Note 2 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Actual, weather normalized data through March 2014. Forecast data beginning April 2014.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

| | Total Division Meter Counts | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 6,821 | 6,718 | 103 | 1.5% | 6,602 | 219 | 3.3% |
| Dec | 6,862 | 6,760 | 102 | 1.5% | 6,634 | 228 | 3.4% |
| Jan | 6,886 | 6,786 | 100 | 1.5% | 6,674 | 212 | 3.2% |
| Feb | 6,892 | 6,792 | 100 | 1.5% | 6,683 | 209 | 3.1% |
| Mar | 6,886 | 6,787 | 99 | 1.5% | 6,689 | 197 | 2.9% |
| Apr | 6,819 | 6,720 | 99 | 1.5% | 6,667 | 152 | 2.3% |
| May | 6,835 | 6,738 | 98 | 1.5% | 6,624 | 211 | 3.2% |
| Jun | 6,767 | 6,668 | 100 | 1.5% | 6,554 | 213 | 3.3% |
| Jul | 6,676 | 6,577 | 100 | 1.5% | 6,462 | 214 | 3.3% |
| Aug | 6,671 | 6,572 | 100 | 1.5% | 6,459 | 212 | 3.3% |
| Sep | 6,702 | 6,603 | 100 | 1.5% | 6,498 | 204 | 3.1% |
| Oct | 6,840 | 6,741 | 100 | 1.5% | 6,638 | 202 | 3.1% |
| Peak | 6,861 | 6,761 | 100 | 1.5% | 6,658 | 203 | 3.0% |
| Off-Peak | 6,749 | 6,650 | 99 | 1.5% | 6,539 | 210 | 3.2% |
| Annual | 6,805 | 6,705 | 100 | 1.5% | 6,599 | 206 | 3.1% |

Note 1 Company Forecast
Note 2 Actual data through March 2014. Forecast data beginning April 2014.
Note 3 Actual Data.

| | Total Division Use Per Meter | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015-2016 | Compared to 2014-2015 | | | Compared to 2013-2014 | | |
| | Forecast | Actual | Change | Percent Change | Actual | Change | Percent Change |
| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Reference | Note 1. | Note 2. | (1-2) | (3/2) | Note 3. | (1-5) | (6/5) |
| Nov | 77.07 | 73.17 | 3.91 | 5.3% | 78.25 | -1.18 | -1.5% |
| Dec | 100.50 | 100.66 | -0.16 | -0.2% | 98.04 | 2.46 | 2.5% |
| Jan | 123.69 | 125.54 | -1.85 | -1.5% | 124.13 | -0.44 | -0.4% |
| Feb | 123.84 | 123.96 | -0.12 | -0.1% | 121.47 | 2.37 | 1.9% |
| Mar | 111.65 | 112.23 | -0.58 | -0.5% | 111.18 | 0.48 | 0.4% |
| Apr | 87.05 | 86.57 | 0.48 | 0.6% | 82.65 | 4.40 | 5.3% |
| May | 66.16 | 65.76 | 0.40 | 0.6% | 63.31 | 2.84 | 4.5% |
| Jun | 57.36 | 57.06 | 0.30 | 0.5% | 54.65 | 2.71 | 5.0% |
| Jul | 47.26 | 47.09 | 0.17 | 0.4% | 45.77 | 1.49 | 3.3% |
| Aug | 48.62 | 48.45 | 0.18 | 0.4% | 45.60 | 3.02 | 6.6% |
| Sep | 48.61 | 48.42 | 0.19 | 0.4% | 46.68 | 1.93 | 4.1% |
| Oct | 54.26 | 53.97 | 0.29 | 0.5% | 53.81 | 0.45 | 0.8% |
| Peak | 624.26 | 622.63 | 1.62 | 0.3% | 616.09 | 8.08 | 1.3% |
| Off-Peak | 322.61 | 321.09 | 1.53 | 0.5% | 310.19 | 12.45 | 4.0% |
| Annual | 949.35 | 946.21 | 3.13 | 0.3% | 929.03 | 20.53 | 2.2% |

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Sales Service Deliveries Forecast by Rate Class

Forecast Calendar Month Sales Service Deliveries (Dth)

| | Res Non-Heat | Res Heat | G40 | G50 | G41 | G51 | G42 | G52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 2,707 | 189,488 | 94,572 | 11,006 | 82,424 | 17,401 | 16,479 | 13,167 | 0 | 427,244 |
| Dec-15 | 3,987 | 279,156 | 139,325 | 16,215 | 121,428 | 25,636 | 24,277 | 19,397 | 0 | 629,421 |
| Jan-16 | 5,034 | 352,424 | 175,892 | 20,471 | 153,298 | 32,364 | 30,649 | 24,488 | 0 | 794,620 |
| Feb-16 | 4,208 | 294,617 | 147,041 | 17,113 | 128,153 | 27,055 | 25,621 | 20,472 | 0 | 664,280 |
| Mar-16 | 3,244 | 227,113 | 113,350 | 13,192 | 98,790 | 20,856 | 19,751 | 15,781 | 0 | 512,077 |
| Apr-16 | 1,912 | 133,839 | 66,798 | 7,774 | 58,217 | 12,291 | 11,639 | 9,300 | 0 | 301,771 |
| May-16 | 2,294 | 68,865 | 24,341 | 12,570 | 30,734 | 24,568 | 6,269 | 34,167 | 0 | 203,809 |
| Jun-16 | 1,528 | 45,866 | 16,212 | 8,372 | 20,470 | 16,363 | 4,175 | 22,757 | 0 | 135,743 |
| Jul-16 | 1,388 | 41,659 | 14,725 | 7,604 | 18,592 | 14,862 | 3,792 | 20,669 | 0 | 123,291 |
| Aug-16 | 1,443 | 43,306 | 15,307 | 7,905 | 19,327 | 15,450 | 3,942 | 21,486 | 0 | 128,165 |
| Sep-16 | 1,579 | 47,410 | 16,757 | 8,654 | 21,159 | 16,914 | 4,316 | 23,522 | 0 | 140,310 |
| Oct-16 | 2,957 | 88,766 | 31,375 | 16,202 | 39,616 | 31,668 | 8,080 | 44,041 | 0 | 262,705 |
| Peak | 21,092 | 1,476,638 | 736,979 | 85,770 | 642,308 | 135,603 | 128,417 | 102,605 | 0 | 3,329,413 |
| Off-Peak | 11,190 | 335,873 | 118,716 | 61,306 | 149,899 | 119,825 | 30,573 | 166,642 | 0 | 994,023 |
| Total | 32,281 | 1,812,511 | 855,695 | 147,076 | 792,207 | 255,428 | 158,990 | 269,247 | 0 | 4,323,436 |

Forecast Calendar Month Distribution Service Deliveries (Dth)

| | Res Non-Heat | Res Heat | G/T40 | G/T50 | G/T41 | G/T51 | G/T42 | G/T52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 2,707 | 189,488 | 111,961 | 13,671 | 146,702 | 40,287 | 70,126 | 136,006 | 77,586 | 788,533 |
| Dec-15 | 3,987 | 279,156 | 159,701 | 19,338 | 196,750 | 52,454 | 87,142 | 163,344 | 90,917 | 1,052,790 |
| Jan-16 | 5,034 | 352,424 | 199,227 | 24,047 | 239,555 | 63,076 | 102,641 | 189,333 | 104,116 | 1,279,452 |
| Feb-16 | 4,208 | 294,617 | 168,090 | 20,339 | 205,962 | 54,759 | 90,563 | 169,171 | 93,919 | 1,101,629 |
| Mar-16 | 3,244 | 227,113 | 133,237 | 16,240 | 172,301 | 47,030 | 81,105 | 156,267 | 88,731 | 925,268 |
| Apr-16 | 1,912 | 133,839 | 82,737 | 10,217 | 117,136 | 33,268 | 60,813 | 121,897 | 71,116 | 632,936 |
| May-16 | 2,294 | 68,865 | 28,630 | 14,960 | 46,560 | 42,212 | 29,153 | 141,943 | 93,939 | 468,559 |
| Jun-16 | 1,528 | 45,866 | 20,237 | 10,615 | 35,321 | 32,920 | 25,650 | 123,894 | 88,153 | 384,186 |
| Jul-16 | 1,388 | 41,659 | 18,467 | 9,689 | 32,399 | 30,254 | 23,756 | 114,690 | 81,951 | 354,253 |
| Aug-16 | 1,443 | 43,306 | 19,187 | 10,067 | 33,644 | 31,410 | 24,643 | 118,980 | 84,977 | 367,657 |
| Sep-16 | 1,579 | 47,410 | 20,768 | 10,889 | 35,958 | 33,413 | 25,715 | 124,306 | 87,845 | 387,884 |
| Oct-16 | 2,957 | 88,766 | 36,221 | 18,903 | 57,497 | 51,603 | 33,936 | 165,812 | 106,137 | 561,833 |
| Peak | 21,092 | 1,476,638 | 854,954 | 103,850 | 1,078,407 | 290,874 | 492,390 | 936,018 | 526,385 | 5,780,607 |
| Off-Peak | 11,190 | 335,873 | 143,510 | 75,124 | 241,379 | 221,813 | 162,855 | 789,626 | 543,002 | 2,524,372 |
| Total | 32,281 | 1,812,511 | 998,464 | 178,974 | 1,319,786 | 512,687 | 655,245 | 1,725,643 | 1,069,387 | 8,304,979 |

Forecast Sales Service Percentage

| | Res Non-Heat | Res Heat | G40 | G50 | G41 | G51 | G42 | G52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 100% | 100% | 84% | 81% | 56% | 43% | 23% | 10% | 0% | 54% |
| Dec-15 | 100% | 100% | 87% | 84% | 62% | 49% | 28% | 12% | 0% | 60% |
| Jan-16 | 100% | 100% | 88% | 85% | 64% | 51% | 30% | 13% | 0% | 62% |
| Feb-16 | 100% | 100% | 87% | 84% | 62% | 49% | 28% | 12% | 0% | 60% |
| Mar-16 | 100% | 100% | 85% | 81% | 57% | 44% | 24% | 10% | 0% | 55% |
| Apr-16 | 100% | 100% | 81% | 76% | 50% | 37% | 19% | 8% | 0% | 48% |
| May-16 | 100% | 100% | 85% | 84% | 66% | 58% | 22% | 24% | 0% | 43% |
| Jun-16 | 100% | 100% | 80% | 79% | 58% | 50% | 16% | 18% | 0% | 35% |
| Jul-16 | 100% | 100% | 80% | 78% | 57% | 49% | 16% | 18% | 0% | 35% |
| Aug-16 | 100% | 100% | 80% | 79% | 57% | 49% | 16% | 18% | 0% | 35% |
| Sep-16 | 100% | 100% | 81% | 79% | 59% | 51% | 17% | 19% | 0% | 36% |
| Oct-16 | 100% | 100% | 87% | 86% | 69% | 61% | 24% | 27% | 0% | 47% |
| Peak | 100% | 100% | 86% | 83% | 60% | 47% | 26% | 11% | 0% | 58% |
| Off-Peak | 100% | 100% | 83% | 82% | 62% | 54% | 19% | 21% | 0% | 39% |
| Total | 100% | 100% | 86% | 82% | 60% | 50% | 24% | 16% | 0% | 52% |

Northern Utilities, Inc.
New Hampshire Division
Sales Service Deliveries Forecast by Rate Class

Forecast Bill Month Sales Service Deliveries (Dth)

| | Res Non-Heat | Res Heat | G40 | G50 | G41 | G51 | G42 | G52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 2,326 | 135,195 | 57,642 | 10,771 | 61,039 | 20,797 | 27,384 | 16,951 | 0 | 332,105 |
| Dec-15 | 3,204 | 234,166 | 112,011 | 12,802 | 105,410 | 22,576 | 22,889 | 19,311 | 0 | 532,370 |
| Jan-16 | 3,861 | 316,654 | 161,960 | 15,198 | 138,251 | 26,094 | 34,254 | 19,334 | 0 | 715,605 |
| Feb-16 | 4,567 | 329,964 | 178,290 | 17,531 | 150,901 | 24,232 | 28,709 | 16,851 | 0 | 751,045 |
| Mar-16 | 4,097 | 268,858 | 139,412 | 16,468 | 108,573 | 21,958 | 13,641 | 16,719 | 0 | 589,726 |
| Apr-16 | 3,037 | 191,802 | 87,665 | 13,000 | 78,134 | 19,946 | 1,540 | 13,438 | 0 | 408,561 |
| May-16 | 2,424 | 112,946 | 48,892 | 11,236 | 59,753 | 27,113 | 11,046 | 53,140 | 0 | 326,551 |
| Jun-16 | 1,984 | 57,551 | 19,149 | 10,117 | 25,116 | 19,341 | 5,294 | 45,838 | 0 | 184,391 |
| Jul-16 | 1,733 | 36,473 | 10,802 | 10,063 | 13,322 | 17,506 | 1,807 | 14,583 | 0 | 106,289 |
| Aug-16 | 1,739 | 34,988 | 10,576 | 10,820 | 14,113 | 20,342 | 3,821 | 19,227 | 0 | 115,626 |
| Sep-16 | 1,601 | 36,493 | 11,254 | 10,037 | 15,257 | 18,012 | 3,377 | 16,886 | 0 | 112,918 |
| Oct-16 | 1,708 | 57,421 | 18,042 | 9,032 | 22,339 | 17,510 | 5,228 | 16,969 | 0 | 148,249 |
| Peak | 21,092 | 1,476,638 | 736,979 | 85,770 | 642,308 | 135,603 | 128,417 | 102,605 | 0 | 3,329,413 |
| Off-Peak | 11,190 | 335,873 | 118,716 | 61,306 | 149,899 | 119,825 | 30,573 | 166,642 | 0 | 994,023 |
| Total | 32,281 | 1,812,511 | 855,695 | 147,076 | 792,207 | 255,428 | 158,990 | 269,247 | 0 | 4,323,436 |

Forecast Bill Month Distribution Service Deliveries (Dth)

| | Res Non-Heat | Res Heat | G/T40 | G/T50 | G/T41 | G/T51 | G/T42 | G/T52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 2,326 | 135,195 | 69,087 | 12,993 | 104,926 | 39,440 | 69,017 | 146,676 | 83,553 | 663,212 |
| Dec-15 | 3,204 | 234,166 | 130,822 | 15,744 | 175,542 | 46,874 | 84,189 | 142,596 | 93,842 | 926,979 |
| Jan-16 | 3,861 | 316,654 | 187,463 | 18,390 | 233,002 | 54,268 | 109,291 | 172,204 | 77,087 | 1,172,219 |
| Feb-16 | 4,567 | 329,964 | 203,630 | 21,034 | 243,843 | 55,125 | 101,678 | 159,026 | 69,141 | 1,188,007 |
| Mar-16 | 4,097 | 268,858 | 160,564 | 19,807 | 185,121 | 51,689 | 77,505 | 171,276 | 102,865 | 1,041,781 |
| Apr-16 | 3,037 | 191,802 | 103,388 | 15,883 | 135,973 | 43,478 | 50,711 | 144,239 | 99,897 | 788,408 |
| May-16 | 2,424 | 112,946 | 56,216 | 13,425 | 83,960 | 43,748 | 32,696 | 134,662 | 87,506 | 567,582 |
| Jun-16 | 1,984 | 57,551 | 23,637 | 12,530 | 40,598 | 37,274 | 24,108 | 158,607 | 91,424 | 447,712 |
| Jul-16 | 1,733 | 36,473 | 13,692 | 12,351 | 23,900 | 34,107 | 21,121 | 118,205 | 92,157 | 353,738 |
| Aug-16 | 1,739 | 34,988 | 12,956 | 13,033 | 23,479 | 36,525 | 23,544 | 127,166 | 87,676 | 361,107 |
| Sep-16 | 1,601 | 36,493 | 13,972 | 12,373 | 26,527 | 34,056 | 27,195 | 122,333 | 89,355 | 363,906 |
| Oct-16 | 1,708 | 57,421 | 23,037 | 11,412 | 42,916 | 36,103 | 34,191 | 128,654 | 94,885 | 430,326 |
| Peak | 21,092 | 1,476,638 | 854,954 | 103,850 | 1,078,407 | 290,874 | 492,390 | 936,018 | 526,385 | 5,780,607 |
| Off-Peak | 11,190 | 335,873 | 143,510 | 75,124 | 241,379 | 221,813 | 162,855 | 789,626 | 543,002 | 2,524,372 |
| Total | 32,281 | 1,812,511 | 998,464 | 178,974 | 1,319,786 | 512,687 | 655,245 | 1,725,643 | 1,069,387 | 8,304,979 |

Forecast Sales Service Percentage

| | Res Non-Heat | Res Heat | G40 | G50 | G41 | G51 | G42 | G52 | Special Contracts | Total Division |
|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 100% | 100% | 83% | 83% | 58% | 53% | 40% | 12% | 0% | 50% |
| Dec-15 | 100% | 100% | 86% | 81% | 60% | 48% | 27% | 14% | 0% | 57% |
| Jan-16 | 100% | 100% | 86% | 83% | 59% | 48% | 31% | 11% | 0% | 61% |
| Feb-16 | 100% | 100% | 88% | 83% | 62% | 44% | 28% | 11% | 0% | 63% |
| Mar-16 | 100% | 100% | 87% | 83% | 59% | 42% | 18% | 10% | 0% | 57% |
| Apr-16 | 100% | 100% | 85% | 82% | 57% | 46% | 3% | 9% | 0% | 52% |
| May-16 | 100% | 100% | 87% | 84% | 71% | 62% | 34% | 39% | 0% | 58% |
| Jun-16 | 100% | 100% | 81% | 81% | 62% | 52% | 22% | 29% | 0% | 41% |
| Jul-16 | 100% | 100% | 79% | 81% | 56% | 51% | 9% | 12% | 0% | 30% |
| Aug-16 | 100% | 100% | 82% | 83% | 60% | 56% | 16% | 15% | 0% | 32% |
| Sep-16 | 100% | 100% | 81% | 81% | 58% | 53% | 12% | 14% | 0% | 31% |
| Oct-16 | 100% | 100% | 78% | 79% | 52% | 49% | 15% | 13% | 0% | 34% |
| Peak | 100% | 100% | 86% | 83% | 60% | 47% | 26% | 11% | 0% | 58% |
| Off-Peak | 100% | 100% | 83% | 82% | 62% | 54% | 19% | 21% | 0% | 39% |
| Total | 100% | 100% | 86% | 82% | 60% | 50% | 24% | 16% | 0% | 52% |

Northern Utilities, Inc.
New Hampshire Division
Estimation of Northern - New Hampshire City-Gate Sendout Requirement

| Month | Calendar Month Distribution Service Usage (Dth) | Estimated Company Use Factor | Estimated Company Use (Dth) | Billed Sales Service Deliveries (Dth) | Net Unbilled Sales Service Deliveries (Dth) | Sales Service Deliveries (Dth) | Sales Service plus Company Use (Dth) | Lost and Unaccounted For (Percent) | Lost and Unaccounted For (Dth) | Estimated Division Sales Service Sendout (Dth) | Estimated Company-Managed Sales | Total Estimated City-Gate Sendout Requirement |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 788,533 | 0.03% | 237 | 332,105 | 95,138 | 427,244 | 427,480 | 0.95% | 4,100 | 431,580 | 17,490 | 449,070 |
| Dec-15 | 1,052,790 | 0.03% | 316 | 532,370 | 97,051 | 629,421 | 629,737 | 0.95% | 6,040 | 635,777 | 99,493 | 735,270 |
| Jan-16 | 1,279,452 | 0.03% | 384 | 715,605 | 79,015 | 794,620 | 795,004 | 0.95% | 7,625 | 802,629 | 152,721 | 955,350 |
| Feb-16 | 1,101,629 | 0.03% | 330 | 751,045 | -86,765 | 664,280 | 664,610 | 0.95% | 6,375 | 670,985 | 117,486 | 788,471 |
| Mar-16 | 925,268 | 0.03% | 278 | 589,726 | -77,648 | 512,077 | 512,355 | 0.95% | 4,914 | 517,269 | 47,344 | 564,613 |
| Apr-16 | 632,936 | 0.03% | 190 | 408,561 | -106,791 | 301,771 | 301,961 | 0.95% | 2,896 | 304,857 | 0 | 304,857 |
| May-16 | 468,559 | 0.03% | 141 | 326,551 | -122,742 | 203,809 | 203,949 | 0.95% | 1,957 | 205,906 | 0 | 205,906 |
| Jun-16 | 384,186 | 0.03% | 115 | 184,391 | -48,648 | 135,743 | 135,858 | 0.95% | 1,303 | 137,161 | 0 | 137,161 |
| Jul-16 | 354,253 | 0.03% | 106 | 106,289 | 17,002 | 123,291 | 123,397 | 0.95% | 1,184 | 124,581 | 0 | 124,581 |
| Aug-16 | 367,657 | 0.03% | 110 | 115,626 | 12,539 | 128,165 | 128,275 | 0.95% | 1,231 | 129,506 | 0 | 129,506 |
| Sep-16 | 387,884 | 0.03% | 116 | 112,918 | 27,392 | 140,310 | 140,427 | 0.95% | 1,347 | 141,774 | 0 | 141,774 |
| Oct-16 | 561,833 | 0.03% | 169 | 148,249 | 114,456 | 262,705 | 262,874 | 0.95% | 2,521 | 265,395 | 0 | 265,395 |
| Peak | 5,780,607 | 0.03% | 1,734 | 3,329,413 | 0 | 3,329,413 | 3,331,147 | 0.95% | 31,950 | 3,363,097 | 434,534 | 3,797,631 |
| Off-Peak | 2,524,372 | 0.03% | 757 | 994,023 | 0 | 994,023 | 994,781 | 0.95% | 9,542 | 1,004,323 | 0 | 1,004,323 |
| Annual | 8,304,979 | 0.03% | 2,491 | 4,323,436 | 0 | 4,323,436 | 4,325,927 | 0.95% | 41,493 | 4,367,420 | 434,534 | 4,801,954 |

| | Jun-11 | Jul-11 | Aug-11 | Sep-11 | Oct-11 | Nov-11 | Dec-11 | Jan-12 | Feb-12 | Mar-12 |
|---|---|---|---|---|---|---|---|---|---|---|
| BTU Factor | 1.043 | 1.039 | 1.038 | 1.041 | 1.042 | 1.047 | 1.037 | 1.032 | 1.03 | 1.035 |
| | | | | | | | | | | |
| GSG Meter Throughput (Mcf) | 270,436 | 244,612 | 266,618 | 284,943 | 411,448 | 528,465 | 774,469 | 924,402 | 771,024 | 625,991 |
| Salem Meter (Mcf) | 11,573 | 9,849 | 10,962 | 11,554 | 20,294 | 28,517 | 46,797 | 58,942 | 47,478 | 34,494 |
| Total Throughput IN (MCF) | 282,010 | 254,462 | 277,581 | 296,498 | 431,743 | 556,983 | 821,267 | 983,345 | 818,503 | 660,486 |
| | | | | | | | | | | |
| GSG Meter Throughput (Dth) | 282,065 | 254,152 | 276,749 | 296,626 | 428,729 | 553,303 | 803,124 | 953,983 | 794,155 | 647,901 |
| Salem Meter (Dth) | 12,071 | 10,233 | 11,379 | 12,028 | 21,146 | 29,857 | 48,528 | 60,828 | 48,902 | 35,701 |
| Total Throughput IN (Dth) | 294,135 | 264,385 | 288,128 | 308,653 | 449,875 | 583,160 | 851,653 | 1,014,811 | 843,057 | 683,602 |
| | | | | | | | | | | |
| Total Billed Units (MCF) | 326,626 | 267,428 | 267,015 | 293,619 | 328,407 | 504,624 | 638,201 | 916,302 | 878,239 | 773,119 |
| Company Use (MCF) | 28 | 21 | 20 | 27 | 98 | 111 | 160 | 266 | 301 | 240 |
| Total Throughput OUT (MCF) | 326,654 | 267,449 | 267,035 | 293,646 | 328,505 | 504,735 | 638,361 | 916,568 | 878,540 | 773,359 |
| | | | | | | | | | | |
| Total Billed Units (Dth) | 340,671 | 277,859 | 277,161 | 305,657 | 342,200 | 528,341 | 661,814 | 945,625 | 904,587 | 800,178 |
| Company Use (Dth) | 29 | 22 | 21 | 28 | 102 | 116 | 166 | 274 | 310 | 248 |
| Total Throughput OUT (Dth) | 340,700 | 277,881 | 277,182 | 305,685 | 342,302 | 528,457 | 661,980 | 945,899 | 904,897 | 800,426 |
| | | | | | | | | | | |
| Total Throughput IN (Dth) | 294,135 | 264,385 | 288,128 | 308,653 | 449,875 | 583,160 | 851,653 | 1,014,811 | 843,057 | 683,602 |
| Total Throughput OUT (Dth) | 340,700 | 277,881 | 277,182 | 305,685 | 342,302 | 528,457 | 661,980 | 945,899 | 904,897 | 800,426 |
| LAUF | -46,565 | -13,496 | 10,946 | 2,969 | 107,574 | 54,703 | 189,673 | 68,912 | -61,840 | -116,824 |
| Company Use (Dth) | 29 | 22 | 21 | 28 | 102 | 116 | 166 | 274 | 310 | 248 |
| Company Gas Allowance | -46,536 | -13,474 | 10,967 | 2,996 | 107,675 | 54,819 | 189,839 | 69,186 | -61,530 | -116,576 |
| LAUF % | -15.83% | -5.10% | 3.80% | 0.96% | 23.91% | 9.38% | 22.27% | 6.79% | -7.34% | -17.09% |
| Company Use % | 0.01% | 0.01% | 0.01% | 0.01% | 0.02% | 0.02% | 0.02% | 0.03% | 0.04% | 0.04% |
| Company Gas Allowance % | -15.82% | -5.10% | 3.81% | 0.97% | 23.93% | 9.40% | 22.29% | 6.82% | -7.30% | -17.05% |

| | Apr-12 | May-12 | Jun-12 | Jul-12 | Aug-12 | Sep-12 | Oct-12 | Nov-12 | Dec-12 | Jan-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| BTU Factor | 1.028 | 1.029 | 1.031 | 1.032 | 1.031 | 1.029 | 1.031 | 1.027 | 1.031 | 1.034 |
| | | | | | | | | | | |
| GSG Meter Throughput (Mcf) | 456,655 | 353,621 | 305,807 | 274,541 | 291,876 | 300,897 | 396,348 | 685,674 | 783,117 | 1,020,632 |
| Salem Meter (Mcf) | 21,251 | 14,628 | 11,332 | 10,022 | 10,329 | 11,898 | 18,768 | 39,103 | 52,707 | 66,624 |
| Total Throughput IN (MCF) | 477,907 | 368,250 | 317,140 | 284,564 | 302,206 | 312,796 | 415,117 | 724,778 | 835,825 | 1,087,257 |
| | | | | | | | | | | |
| GSG Meter Throughput (Dth) | 469,441 | 363,876 | 315,287 | 283,326 | 300,924 | 309,623 | 408,635 | 704,187 | 807,394 | 1,055,333 |
| Salem Meter (Dth) | 21,846 | 15,052 | 11,683 | 10,343 | 10,649 | 12,243 | 19,350 | 40,159 | 54,341 | 68,889 |
| Total Throughput IN (Dth) | 491,287 | 378,928 | 326,970 | 293,669 | 311,573 | 321,866 | 427,985 | 744,346 | 861,735 | 1,124,223 |
| | | | | | | | | | | |
| Total Billed Units (MCF) | 555,475 | 417,161 | 337,685 | 290,872 | 293,154 | 294,789 | 350,450 | 535,061 | 778,077 | 968,852 |
| Company Use (MCF) | 173 | 87 | 67 | 75 | 148 | 166 | 107 | 111 | 211 | 254 |
| Total Throughput OUT (MCF) | 555,648 | 417,248 | 337,752 | 290,947 | 293,302 | 294,955 | 350,557 | 535,172 | 778,288 | 969,106 |
| | | | | | | | | | | |
| Total Billed Units (Dth) | 571,029 | 429,260 | 348,153 | 300,179 | 302,241 | 303,338 | 361,315 | 549,507 | 802,198 | 1,001,792 |
| Company Use (Dth) | 178 | 90 | 69 | 77 | 153 | 171 | 110 | 114 | 218 | 263 |
| Total Throughput OUT (Dth) | 571,207 | 429,350 | 348,222 | 300,256 | 302,394 | 303,509 | 361,425 | 549,621 | 802,416 | 1,002,055 |
| | | | | | | | | | | |
| Total Throughput IN (Dth) | 491,287 | 378,928 | 326,970 | 293,669 | 311,573 | 321,866 | 427,985 | 744,346 | 861,735 | 1,124,223 |
| Total Throughput OUT (Dth) | 571,207 | 429,350 | 348,222 | 300,256 | 302,394 | 303,509 | 361,425 | 549,621 | 802,416 | 1,002,055 |
| LAUF | -79,920 | -50,421 | -21,251 | -6,587 | 9,179 | 18,357 | 66,560 | 194,725 | 59,319 | 122,168 |
| Company Use (Dth) | 178 | 90 | 69 | 77 | 153 | 171 | 110 | 114 | 218 | 263 |
| Company Gas Allowance | -79,742 | -50,332 | -21,183 | -6,510 | 9,332 | 18,528 | 66,670 | 194,839 | 59,537 | 122,431 |
| LAUF % | -16.27% | -13.31% | -6.50% | -2.24% | 2.95% | 5.70% | 15.55% | 26.16% | 6.88% | 10.87% |
| Company Use % | 0.04% | 0.02% | 0.02% | 0.03% | 0.05% | 0.05% | 0.03% | 0.02% | 0.03% | 0.02% |
| Company Gas Allowance % | -16.23% | -13.28% | -6.48% | -2.22% | 3.00% | 5.76% | 15.58% | 26.18% | 6.91% | 10.89% |

| | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | Oct-13 | Nov-13 | Dec-13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BTU Factor | 1.026 | 1.024 | 1.025 | 1.029 | 1.028 | 1.025 | 1.022 | 1.028 | 1.034 | 1.028 | 1.03 |
| | | | | | | | | | | | |
| GSG Meter Throughput (Mcf) | 899,906 | 809,744 | 554,200 | 384,902 | 317,797 | 297,037 | 312,639 | 329,270 | 441,664 | 721,172 | 1,011,103 |
| Salem Meter (Mcf) | 58,701 | 49,074 | 27,692 | 15,702 | 11,992 | 10,261 | 11,661 | 12,337 | 21,451 | 43,060 | 66,847 |
| Total Throughput IN (MCF) | 958,608 | 858,819 | 581,893 | 400,605 | 329,790 | 307,299 | 324,301 | 341,608 | 463,116 | 764,233 | 1,077,951 |
| | | | | | | | | | | | |
| GSG Meter Throughput (Dth) | 923,304 | 829,178 | 568,055 | 396,064 | 326,695 | 304,463 | 319,517 | 338,490 | 456,681 | 741,365 | 1,041,436 |
| Salem Meter (Dth) | 60,227 | 50,252 | 28,384 | 16,157 | 12,328 | 10,518 | 11,918 | 12,682 | 22,180 | 44,266 | 68,852 |
| Total Throughput IN (Dth) | 983,531 | 879,430 | 596,439 | 412,222 | 339,023 | 314,980 | 331,435 | 351,172 | 478,861 | 785,630 | 1,110,289 |
| | | | | | | | | | | | |
| Total Billed Units (MCF) | 1,048,986 | 906,050 | 697,596 | 470,411 | 366,747 | 302,982 | 313,495 | 319,318 | 383,503 | 627,612 | 900,731 |
| Company Use (MCF) | 313 | 279 | 205 | 104 | 105 | 100 | 167 | 118 | 80 | 115 | 218 |
| Total Throughput OUT (MCF) | 1,049,299 | 906,329 | 697,801 | 470,515 | 366,852 | 303,082 | 313,662 | 319,436 | 383,583 | 627,727 | 900,949 |
| | | | | | | | | | | | |
| Total Billed Units (Dth) | 1,076,260 | 927,794 | 715,036 | 484,053 | 377,016 | 310,556 | 320,392 | 328,259 | 396,543 | 645,185 | 927,753 |
| Company Use (Dth) | 321 | 286 | 210 | 107 | 108 | 103 | 171 | 121 | 83 | 118 | 225 |
| Total Throughput OUT (Dth) | 1,076,581 | 928,080 | 715,246 | 484,160 | 377,124 | 310,659 | 320,563 | 328,380 | 396,626 | 645,303 | 927,978 |
| | | | | | | | | | | | |
| Total Throughput IN (Dth) | 983,531 | 879,430 | 596,439 | 412,222 | 339,023 | 314,980 | 331,435 | 351,172 | 478,861 | 785,630 | 1,110,289 |
| Total Throughput OUT (Dth) | 1,076,581 | 928,080 | 715,246 | 484,160 | 377,124 | 310,659 | 320,563 | 328,380 | 396,626 | 645,303 | 927,978 |
| LAUF | -93,050 | -48,650 | -118,807 | -71,938 | -38,101 | 4,321 | 10,872 | 22,792 | 82,235 | 140,327 | 182,311 |
| Company Use (Dth) | 321 | 286 | 210 | 107 | 108 | 103 | 171 | 121 | 83 | 118 | 225 |
| Company Gas Allowance | -92,729 | -48,364 | -118,597 | -71,831 | -37,993 | 4,424 | 11,043 | 22,913 | 82,318 | 140,445 | 182,536 |
| LAUF % | -9.46% | -5.53% | -19.92% | -17.45% | -11.24% | 1.37% | 3.28% | 6.49% | 17.17% | 17.86% | 16.42% |
| Company Use % | 0.03% | 0.03% | 0.04% | 0.03% | 0.03% | 0.03% | 0.05% | 0.03% | 0.02% | 0.02% | 0.02% |
| Company Gas Allowance % | -9.43% | -5.50% | -19.88% | -17.43% | -11.21% | 1.40% | 3.33% | 6.52% | 17.19% | 17.88% | 16.44% |

| | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 |
|---|---|---|---|---|---|---|---|---|---|---|
| BTU Factor | 1.037 | 1.033 | 1.03 | 1.031 | 1.033 | 1.037 | 1.033 | 1.031 | 1.026 | 1.0259 |
| | | | | | | | | | | |
| GSG Meter Throughput (Mcf) | 1,101,964 | 945,004 | 960,102 | 585,094 | 400,652 | 351,168 | 308,511 | 314,116 | 336,173 | 439,537 |
| Salem Meter (Mcf) | 78,114 | 66,670 | 63,835 | 30,968 | 16,158 | 11,799 | 10,795 | 11,573 | 13,023 | 20,959 |
| Total Throughput IN (MCF) | 1,180,079 | 1,011,675 | 1,023,938 | 616,063 | 416,811 | 362,968 | 319,306 | 325,689 | 349,196 | 460,496 |
| | | | | | | | | | | |
| GSG Meter Throughput (Dth) | 1,142,737 | 976,189 | 988,905 | 603,232 | 413,874 | 364,161 | 318,692 | 323,854 | 344,913 | 450,921 |
| Salem Meter (Dth) | 81,004 | 68,870 | 65,750 | 31,928 | 16,691 | 12,236 | 11,151 | 11,932 | 13,362 | 21,502 |
| Total Throughput IN (Dth) | 1,223,741 | 1,045,059 | 1,054,655 | 635,160 | 430,565 | 376,397 | 329,843 | 335,785 | 358,275 | 472,423 |
| | | | | | | | | | | |
| Total Billed Units (MCF) | 1,151,467 | 1,126,362 | 1,070,253 | 782,448 | 512,252 | 399,637 | 322,885 | 317,671 | 330,546 | 405,428 |
| Company Use (MCF) | 307 | 327 | 295 | 229 | 113 | 52 | 107 | 145 | 106 | 76 |
| Total Throughput OUT (MCF) | 1,151,774 | 1,126,689 | 1,070,548 | 782,677 | 512,365 | 399,689 | 322,992 | 317,816 | 330,652 | 405,504 |
| | | | | | | | | | | |
| Total Billed Units (Dth) | 1,194,071 | 1,163,532 | 1,102,360 | 806,704 | 529,156 | 414,423 | 333,540 | 327,519 | 339,140 | 415,928 |
| Company Use (Dth) | 318 | 338 | 304 | 236 | 117 | 54 | 110 | 150 | 108 | 78 |
| Total Throughput OUT (Dth) | 1,194,389 | 1,163,870 | 1,102,664 | 806,940 | 529,273 | 414,477 | 333,650 | 327,669 | 339,248 | 416,006 |
| | | | | | | | | | | |
| Total Throughput IN (Dth) | 1,223,741 | 1,045,059 | 1,054,655 | 635,160 | 430,565 | 376,397 | 329,843 | 335,785 | 358,275 | 472,423 |
| Total Throughput OUT (Dth) | 1,194,389 | 1,163,870 | 1,102,664 | 806,940 | 529,273 | 414,477 | 333,650 | 327,669 | 339,248 | 416,006 |
| LAUF | 29,351 | -118,811 | -48,009 | -171,780 | -98,708 | -38,080 | -3,807 | 8,117 | 19,027 | 56,417 |
| Company Use (Dth) | 318 | 338 | 304 | 236 | 117 | 54 | 110 | 150 | 108 | 78 |
| Company Gas Allowance | 29,670 | -118,473 | -47,705 | -171,544 | -98,591 | -38,026 | -3,697 | 8,266 | 19,135 | 56,495 |
| LAUF % | 2.40% | -11.37% | -4.55% | -27.05% | -22.93% | -10.12% | -1.15% | 2.42% | 5.31% | 11.94% |
| Company Use % | 0.03% | 0.03% | 0.03% | 0.04% | 0.03% | 0.01% | 0.03% | 0.04% | 0.03% | 0.02% |
| Company Gas Allowance % | 2.42% | -11.34% | -4.52% | -27.01% | -22.90% | -10.10% | -1.12% | 2.46% | 5.34% | 11.96% |

| | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | **48-Month** |
|---|---|---|---|---|---|---|---|---|
| BTU Factor | 1.028 | 1.032 | 1.038 | 1.04 | 1.033 | 1.029 | 1.029 | **1.032** |
| | | | | | | | | |
| GSG Meter Throughput (Mcf) | 732,168 | 902,739 | 1,196,940 | 1,180,897 | 1,001,995 | 615,556 | 376,431 | **27,800,057** |
| Salem Meter (Mcf) | 43,867 | 59,116 | 83,871 | 85,696 | 66,078 | 32,039 | 14,557 | **1,575,018** |
| Total Throughput IN (MCF) | 776,035 | 961,855 | 1,280,812 | 1,266,594 | 1,068,074 | 647,596 | 390,989 | **29,375,118** |
| | | | | | | | | |
| GSG Meter Throughput (Dth) | 752,669 | 931,627 | 1,242,424 | 1,228,133 | 1,035,061 | 633,407 | 387,347 | **28,692,205** |
| Salem Meter (Dth) | 45,095 | 61,008 | 87,058 | 89,124 | 68,259 | 32,968 | 14,979 | **1,625,910** |
| Total Throughput IN (Dth) | 797,764 | 992,634 | 1,329,482 | 1,317,257 | 1,103,319 | 666,375 | 402,327 | **30,318,115** |
| | | | | | | | | |
| Total Billed Units (MCF) | 594,699 | 890,919 | 1,134,302 | 1,279,798 | 1,155,695 | 813,869 | 450,311 | **29,091,129** |
| Company Use (MCF) | 109 | 225 | 336 | 399 | 361 | 230 | 95 | **7,987** |
| Total Throughput OUT (MCF) | 594,808 | 891,144 | 1,134,638 | 1,280,197 | 1,156,056 | 814,099 | 450,406 | **29,099,116** |
| | | | | | | | | |
| Total Billed Units (Dth) | 611,351 | 919,427 | 1,177,407 | 1,330,990 | 1,193,832 | 837,472 | 463,370 | **30,022,174** |
| Company Use (Dth) | 112 | 233 | 349 | 415 | 373 | 237 | 98 | **8,241** |
| Total Throughput OUT (Dth) | 611,463 | 919,660 | 1,177,756 | 1,331,405 | 1,194,205 | 837,709 | 463,468 | **30,030,415** |
| | | | | | | | | |
| Total Throughput IN (Dth) | 797,764 | 992,634 | 1,329,482 | 1,317,257 | 1,103,319 | 666,375 | 402,327 | **30,318,115** |
| Total Throughput OUT (Dth) | 611,463 | 919,660 | 1,177,756 | 1,331,405 | 1,194,205 | 837,709 | 463,468 | **30,030,415** |
| LAUF | 186,301 | 72,975 | 151,726 | -14,148 | -90,886 | -171,334 | -61,141 | **287,700** |
| Company Use (Dth) | 112 | 233 | 349 | 415 | 373 | 237 | 98 | **8,241** |
| Company Gas Allowance | 186,413 | 73,207 | 152,075 | -13,733 | -90,513 | -171,097 | -61,043 | **295,941** |
| LAUF % | 23.35% | 7.35% | 11.41% | -1.07% | -8.24% | -25.71% | -15.20% | **0.95%** |
| Company Use % | 0.01% | 0.02% | 0.03% | 0.03% | 0.03% | 0.04% | 0.02% | **0.03%** |
| Company Gas Allowance % | 23.37% | 7.38% | 11.44% | -1.04% | -8.20% | -25.68% | -15.17% | **0.98%** |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Commodity Costs to Customer Classes

### Base Commodity Costs

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **BASE SENDOUT BY CLASS** | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** |
| 2 | **Total Therms** | | | | | | | | |
| 3 | Res Heat | 415,423 | 429,270 | 429,270 | 401,575 | 429,270 | 415,423 | 5,059,834 | 2,520,230 |
| 4 | Res General | 13,840 | 14,301 | 14,301 | 13,379 | 14,301 | 13,840 | 168,571 | 83,963 |
| 5 | G50 Low Annual-Low Winter | 75,826 | 78,354 | 78,354 | 73,298 | 78,354 | 75,826 | 923,558 | 460,011 |
| 6 | G40 Low Annual-High Winter | 146,833 | 151,728 | 151,728 | 141,939 | 151,728 | 146,833 | 1,788,425 | 890,788 |
| 7 | G51 Med Annual-Low Winter | 148,205 | 153,145 | 153,145 | 143,264 | 153,145 | 124,165 | 1,781,088 | 875,068 |
| 8 | G41 Med Annual-High Winter | 185,402 | 191,582 | 191,582 | 179,222 | 191,582 | 185,402 | 2,258,186 | 1,124,770 |
| 9 | G52 High Annual-Low Winter | 133,003 | 195,931 | 212,981 | 199,241 | 159,410 | 93,950 | 2,254,535 | 994,516 |
| 10 | G42 High Annual-High Winter | 37,814 | 39,075 | 39,075 | 36,554 | 39,075 | 37,814 | 460,577 | 229,407 |
| 11 | Total Firm Sales | 1,156,345 | 1,253,385 | 1,270,435 | 1,188,471 | 1,216,864 | 1,093,252 | 14,694,774 | 7,178,752 |
| 12 | **% of Total** | | | | | | | | |
| 13 | Res Heat | 35.93% | 34.25% | 33.79% | 33.79% | 35.28% | 38.00% | | |
| 14 | Res General | 1.20% | 1.14% | 1.13% | 1.13% | 1.18% | 1.27% | | |
| 15 | G50 Low Annual-Low Winter | 6.56% | 6.25% | 6.17% | 6.17% | 6.44% | 6.94% | | |
| 16 | G40 Low Annual-High Winter | 12.70% | 12.11% | 11.94% | 11.94% | 12.47% | 13.43% | | |
| 17 | G51 Med Annual-Low Winter | 12.82% | 12.22% | 12.05% | 12.05% | 12.59% | 11.36% | | |
| 18 | G41 Med Annual-High Winter | 16.03% | 15.29% | 15.08% | 15.08% | 15.74% | 16.96% | | |
| 19 | G52 High Annual-Low Winter | 11.50% | 15.63% | 16.76% | 16.76% | 13.10% | 8.59% | | |
| 20 | G42 High Annual-High Winter | 3.27% | 3.12% | 3.08% | 3.08% | 3.21% | 3.46% | | |
| 21 | Total Firm Sales | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22 | **BASE COMMODITY COSTS Excld Hedging** | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** |
| 23 | TOTAL BASE COMMODITY Excld Hedging | $ 632,618 | $ 731,007 | $ 822,331 | $ 771,379 | $ 715,810 | $ 328,650 | $ 5,827,919 | $ 4,001,796 |
| 24 | Res Heat | $ 227,271 | $ 250,362 | $ 277,859 | $ 260,643 | $ 252,514 | $ 124,883 | $ 2,010,565 | $ 1,393,532 |
| 25 | Res General | $ 7,572 | $ 8,341 | $ 9,257 | $ 8,683 | $ 8,413 | $ 4,161 | $ 66,983 | $ 46,426 |
| 26 | G50 Low Annual-Low Winter | $ 41,483 | $ 45,698 | $ 50,717 | $ 47,574 | $ 46,091 | $ 22,795 | $ 366,983 | $ 254,358 |
| 27 | G40 Low Annual-High Winter | $ 80,330 | $ 88,492 | $ 98,211 | $ 92,126 | $ 89,253 | $ 44,141 | $ 710,645 | $ 492,551 |
| 28 | G51 Med Annual-Low Winter | $ 81,080 | $ 89,318 | $ 99,128 | $ 92,986 | $ 90,086 | $ 37,326 | $ 710,055 | $ 489,925 |
| 29 | G41 Med Annual-High Winter | $ 101,430 | $ 111,736 | $ 124,008 | $ 116,324 | $ 112,696 | $ 55,735 | $ 897,308 | $ 621,929 |
| 30 | G52 High Annual-Low Winter | $ 72,764 | $ 114,272 | $ 137,859 | $ 129,317 | $ 93,772 | $ 28,243 | $ 882,366 | $ 576,227 |
| 31 | G42 High Annual-High Winter | $ 20,688 | $ 22,789 | $ 25,292 | $ 23,725 | $ 22,985 | $ 11,368 | $ 183,014 | $ 126,848 |
| 32 | | | | | | | | | |
| 33 | Residential | $ 234,843 | $ 258,702 | $ 287,116 | $ 269,326 | $ 260,927 | $ 129,043 | $ 2,077,548 | $ 1,439,959 |
| 34 | SALES HLF CLASSES | $ 195,327 | $ 249,288 | $ 287,704 | $ 269,878 | $ 229,948 | $ 88,363 | $ 1,959,405 | $ 1,320,510 |
| 35 | SALES LLF CLASSES | $ 202,448 | $ 223,017 | $ 247,511 | $ 232,175 | $ 224,934 | $ 111,243 | $ 1,790,967 | $ 1,241,328 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36 | **NEW HAMPSHIRE BASE HEDGING COMMODITY COSTS** | | | | | | | **Annual** | **Winter** |
| 37 | TOTAL BASE HEDGING COMMODITY | $ 3,121 | $ 4,661 | $ 6,286 | $ 4,687 | $ 3,949 | $ - | $ 22,704 | $ 22,704 |
| 38 | Res Heat | $ 1,121 | $ 1,596 | $ 2,124 | $ 1,584 | $ 1,393 | $ - | $ 7,818 | $ 7,818 |
| 39 | Res General | $ 37 | $ 53 | $ 71 | $ 53 | $ 46 | $ - | $ 260 | $ 260 |
| 40 | G50 Low Annual-Low Winter | $ 205 | $ 291 | $ 388 | $ 289 | $ 254 | $ - | $ 1,427 | $ 1,427 |
| 41 | G40 Low Annual-High Winter | $ 396 | $ 564 | $ 751 | $ 560 | $ 492 | $ - | $ 2,763 | $ 2,763 |
| 42 | G51 Med Annual-Low Winter | $ 400 | $ 569 | $ 758 | $ 565 | $ 497 | $ - | $ 2,789 | $ 2,789 |
| 43 | G41 Med Annual-High Winter | $ 500 | $ 712 | $ 948 | $ 707 | $ 622 | $ - | $ 3,489 | $ 3,489 |
| 44 | G52 High Annual-Low Winter | $ 359 | $ 729 | $ 1,054 | $ 786 | $ 517 | $ - | $ 3,444 | $ 3,444 |
| 45 | G42 High Annual-High Winter | $ 102 | $ 145 | $ 193 | $ 144 | $ 127 | $ - | $ 712 | $ 712 |
| 46 | | | | | | | | | |
| 47 | Residential | $ 1,158 | $ 1,649 | $ 2,195 | $ 1,636 | $ 1,440 | $ - | $ 8,079 | $ 8,079 |
| 48 | SALES HLF CLASSES | $ 964 | $ 1,589 | $ 2,199 | $ 1,640 | $ 1,269 | $ - | $ 7,661 | $ 7,661 |
| 49 | SALES LLF CLASSES | $ 999 | $ 1,422 | $ 1,892 | $ 1,411 | $ 1,241 | $ - | $ 6,964 | $ 6,964 |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Commodity Costs to Customer Classes

### Base Commodity Costs

| | | |
|---|---|---|
| 1 | **BASE SENDOUT BY CLASS** | |
| 2 | **Total Therms** | |
| 3 | Res Heat | Schedule 10B, LN 52 |
| 4 | Res General | Schedule 10B, LN 53 |
| 5 | G50 Low Annual-Low Winter | Schedule 10B, LN 54 |
| 6 | G40 Low Annual-High Winter | Schedule 10B, LN 55 |
| 7 | G51 Med Annual-Low Winter | Schedule 10B, LN 56 |
| 8 | G41 Med Annual-High Winter | Schedule 10B, LN 57 |
| 9 | G52 High Annual-Low Winter | Schedule 10B, LN 58 |
| 10 | G42 High Annual-High Winter | Schedule 10B, LN 59 |
| 11 | Total Firm Sales | Sum LN 3 : LN 10 |
| 12 | **% of Total** | |
| 13 | Res Heat | LN 3 / LN 11 |
| 14 | Res General | LN 4 / LN 11 |
| 15 | G50 Low Annual-Low Winter | LN 5 / LN 11 |
| 16 | G40 Low Annual-High Winter | LN 6 / LN 11 |
| 17 | G51 Med Annual-Low Winter | LN 7 / LN 11 |
| 18 | G41 Med Annual-High Winter | LN 8 / LN 11 |
| 19 | G52 High Annual-Low Winter | LN 9 / LN 11 |
| 20 | G42 High Annual-High Winter | LN 10 / LN 11 |
| 21 | Total Firm Sales | Sum LN 13 : LN 20 |

| | | |
|---|---|---|
| 22 | **BASE COMMODITY COSTS Excld Hedging** | |
| 23 | TOTAL BASE COMMODITY Excld Hedging | Schedule 1B, LN 37 |
| 24 | Res Heat | LN 23 * LN 13 |
| 25 | Res General | LN 23 * LN 14 |
| 26 | G50 Low Annual-Low Winter | LN 23 * LN 15 |
| 27 | G40 Low Annual-High Winter | LN 23 * LN 16 |
| 28 | G51 Med Annual-Low Winter | LN 23 * LN 17 |
| 29 | G41 Med Annual-High Winter | LN 23 * LN 18 |
| 30 | G52 High Annual-Low Winter | LN 23 * LN 19 |
| 31 | G42 High Annual-High Winter | LN 23 * LN 20 |
| 32 | | |
| 33 | Residential | LN 24 + LN 25 |
| 34 | SALES HLF CLASSES | LN 26 + LN 28 + LN 30 |
| 35 | SALES LLF CLASSES | LN 27 + LN 29 + LN 31 |

| | | |
|---|---|---|
| 36 | **NEW HAMPSHIRE BASE HEDGING COMMODITY COSTS** | |
| 37 | TOTAL BASE HEDGING COMMODITY | Schedule 1B, LN 38 |
| 38 | Res Heat | LN 37 * LN 13 |
| 39 | Res General | LN 37 * LN 14 |
| 40 | G50 Low Annual-Low Winter | LN 37 * LN 15 |
| 41 | G40 Low Annual-High Winter | LN 37 * LN 16 |
| 42 | G51 Med Annual-Low Winter | LN 37 * LN 17 |
| 43 | G41 Med Annual-High Winter | LN 37 * LN 18 |
| 44 | G52 High Annual-Low Winter | LN 37 * LN 19 |
| 45 | G42 High Annual-High Winter | LN 37 * LN 20 |
| 46 | | |
| 47 | Residential | LN 38 + LN 39 |
| 48 | SALES HLF CLASSES | LN 40 + LN 42 + LN 44 |
| 49 | SALES LLF CLASSES | LN 41 + LN 43 + LN 45 |

# Northern Utilities - NEW HAMPSHIRE DIVISION
# Allocation of Commodity Costs to Customer Classes

## Remaining Commodity Costs

| | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|
| 50 | **REMAINING SENDOUT BY CLASS** | | | | | | | | |
| 51 | **Total Therms** | | | | | | | | |
| 52 | Res Heat | 1,498,691 | 2,390,484 | 3,130,495 | 2,574,331 | 1,864,886 | 936,658 | 13,249,470 | 12,395,546 |
| 53 | Res General | 13,500 | 25,975 | 36,545 | 29,128 | 18,467 | 5,473 | 157,536 | 129,087 |
| 54 | G50 Low Annual-Low Winter | 35,355 | 85,432 | 128,415 | 99,557 | 54,902 | 2,710 | 562,235 | 406,371 |
| 55 | G40 Low Annual-High Winter | 808,487 | 1,255,591 | 1,624,925 | 1,343,315 | 993,269 | 527,980 | 6,855,392 | 6,553,568 |
| 56 | G51 Med Annual-Low Winter | 27,573 | 105,800 | 173,758 | 130,021 | 57,533 | - | 799,328 | 494,686 |
| 57 | G41 Med Annual-High Winter | 647,200 | 1,034,956 | 1,356,846 | 1,115,239 | 806,331 | 402,727 | 5,744,401 | 5,363,298 |
| 58 | G52 High Annual-Low Winter | - | - | 34,370 | 7,541 | - | - | 465,583 | 41,911 |
| 59 | G42 High Annual-High Winter | 128,648 | 206,147 | 270,502 | 222,247 | 160,438 | 79,770 | 1,145,481 | 1,067,751 |
| 60 | Total Firm Sales | 3,159,455 | 5,104,385 | 6,755,855 | 5,521,379 | 3,955,826 | 1,955,318 | 28,979,426 | 26,452,218 |
| 61 | **% of Total** | | | | | | | | |
| 62 | Res Heat | 47.44% | 46.83% | 46.34% | 46.62% | 47.14% | 47.90% | | |
| 63 | Res General | 0.43% | 0.51% | 0.54% | 0.53% | 0.47% | 0.28% | | |
| 64 | G50 Low Annual-Low Winter | 1.12% | 1.67% | 1.90% | 1.80% | 1.39% | 0.14% | | |
| 65 | G40 Low Annual-High Winter | 25.59% | 24.60% | 24.05% | 24.33% | 25.11% | 27.00% | | |
| 66 | G51 Med Annual-Low Winter | 0.87% | 2.07% | 2.57% | 2.35% | 1.45% | 0.00% | | |
| 67 | G41 Med Annual-High Winter | 20.48% | 20.28% | 20.08% | 20.20% | 20.38% | 20.60% | | |
| 68 | G52 High Annual-Low Winter | 0.00% | 0.00% | 0.51% | 0.14% | 0.00% | 0.00% | | |
| 69 | G42 High Annual-High Winter | 4.07% | 4.04% | 4.00% | 4.03% | 4.06% | 4.08% | | |
| 70 | Total Firm Sales | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | | |

| | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|
| 71 | **REMAINING COMMODITY COSTS EXCLD HEDGING** | | | | | | | | |
| 72 | REMAINING COMMODITY Excld Hedging | $ 1,723,509 | $ 2,630,801 | $ 3,981,288 | $ 2,609,254 | $ 2,079,415 | $ 595,242 | $ 14,332,082 | $ 13,619,510 |
| 73 | Res Heat | $ 817,549 | $ 1,232,056 | $ 1,844,830 | $ 1,216,559 | $ 980,294 | $ 285,140 | $ 6,617,200 | $ 6,376,428 |
| 74 | Res General | $ 7,365 | $ 13,387 | $ 21,536 | $ 13,765 | $ 9,708 | $ 1,666 | $ 75,448 | $ 67,427 |
| 75 | G50 Low Annual-Low Winter | $ 19,287 | $ 44,032 | $ 75,676 | $ 47,048 | $ 28,860 | $ 825 | $ 259,674 | $ 215,727 |
| 76 | G40 Low Annual-High Winter | $ 441,036 | $ 647,132 | $ 957,584 | $ 634,814 | $ 522,121 | $ 160,729 | $ 3,448,518 | $ 3,363,416 |
| 77 | G51 Med Annual-Low Winter | $ 15,042 | $ 54,530 | $ 102,397 | $ 61,444 | $ 30,243 | $ - | $ 349,552 | $ 263,655 |
| 78 | G41 Med Annual-High Winter | $ 353,053 | $ 533,416 | $ 799,602 | $ 527,032 | $ 423,855 | $ 122,599 | $ 2,867,013 | $ 2,759,557 |
| 79 | G52 High Annual-Low Winter | $ - | $ - | $ 20,254 | $ 3,564 | $ - | $ - | $ 143,277 | $ 23,818 |
| 80 | G42 High Annual-High Winter | $ 70,178 | $ 106,248 | $ 159,409 | $ 105,028 | $ 84,335 | $ 24,284 | $ 571,400 | $ 549,483 |
| 81 | | | | | | | | | |
| 82 | Residential | $ 824,913 | $ 1,245,444 | $ 1,866,366 | $ 1,230,324 | $ 990,001 | $ 286,806 | $ 6,692,648 | $ 6,443,854 |
| 83 | SALES HLF CLASSES | $ 34,328 | $ 98,561 | $ 198,328 | $ 112,056 | $ 59,103 | $ 825 | $ 752,504 | $ 503,200 |
| 84 | SALES LLF CLASSES | $ 864,268 | $ 1,286,797 | $ 1,916,595 | $ 1,266,874 | $ 1,030,311 | $ 307,612 | $ 6,886,931 | $ 6,672,456 |

| | | | | | | | | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|
| 85 | **REMAINING COMMODITY HEDGING COSTS** | | | | | | | | |
| 86 | TOTAL REMAINING COMMODITY HEDGING | $ 8,382 | $ 13,781 | $ 16,731 | $ 12,413 | $ 9,982 | $ - | $ 61,289 | $ 61,289 |
| 87 | Res Heat | $ 3,976 | $ 6,454 | $ 7,753 | $ 5,788 | $ 4,706 | $ - | $ 28,676 | $ 28,676 |
| 88 | Res General | $ 36 | $ 70 | $ 91 | $ 65 | $ 47 | $ - | $ 309 | $ 309 |
| 89 | G50 Low Annual-Low Winter | $ 94 | $ 231 | $ 318 | $ 224 | $ 139 | $ - | $ 1,005 | $ 1,005 |
| 90 | G40 Low Annual-High Winter | $ 2,145 | $ 3,390 | $ 4,024 | $ 3,020 | $ 2,506 | $ - | $ 15,085 | $ 15,085 |
| 91 | G51 Med Annual-Low Winter | $ 73 | $ 286 | $ 430 | $ 292 | $ 145 | $ - | $ 1,227 | $ 1,227 |
| 92 | G41 Med Annual-High Winter | $ 1,717 | $ 2,794 | $ 3,360 | $ 2,507 | $ 2,035 | $ - | $ 12,413 | $ 12,413 |
| 93 | G52 High Annual-Low Winter | $ - | $ - | $ 85 | $ 17 | $ - | $ - | $ 102 | $ 102 |
| 94 | G42 High Annual-High Winter | $ 341 | $ 557 | $ 670 | $ 500 | $ 405 | $ - | $ 2,472 | $ 2,472 |
| 95 | | | | | | | | $ - | $ - |
| 96 | Residential | $ 4,012 | $ 6,524 | $ 7,843 | $ 5,853 | $ 4,752 | $ - | $ 28,985 | $ 28,985 |
| 97 | SALES HLF CLASSES | $ 167 | $ 516 | $ 833 | $ 533 | $ 284 | $ - | $ 2,334 | $ 2,334 |
| 98 | SALES LLF CLASSES | $ 4,203 | $ 6,741 | $ 8,055 | $ 6,027 | $ 4,946 | $ - | $ 29,971 | $ 29,971 |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Commodity Costs to Customer Classes

### Remaining Commodity Costs

| | | |
|---|---|---|
| 50 | **REMAINING SENDOUT BY CLASS** | |
| 51 | **Total Therms** | |
| 52 | Res Heat | Schedule 10B, LN 68 |
| 53 | Res General | Schedule 10B, LN 69 |
| 54 | G50 Low Annual-Low Winter | Schedule 10B, LN 70 |
| 55 | G40 Low Annual-High Winter | Schedule 10B, LN 71 |
| 56 | G51 Med Annual-Low Winter | Schedule 10B, LN 72 |
| 57 | G41 Med Annual-High Winter | Schedule 10B, LN 73 |
| 58 | G52 High Annual-Low Winter | Schedule 10B, LN 74 |
| 59 | G42 High Annual-High Winter | Schedule 10B, LN 75 |
| 60 | Total Firm Sales | Sum LN 52 : LN 59 |
| 61 | **% of Total** | |
| 62 | Res Heat | LN 52 / LN 60 |
| 63 | Res General | LN 53 / LN 60 |
| 64 | G50 Low Annual-Low Winter | LN 54 / LN 60 |
| 65 | G40 Low Annual-High Winter | LN 55 / LN 60 |
| 66 | G51 Med Annual-Low Winter | LN 56 / LN 60 |
| 67 | G41 Med Annual-High Winter | LN 57 / LN 60 |
| 68 | G52 High Annual-Low Winter | LN 58 / LN 60 |
| 69 | G42 High Annual-High Winter | LN 59 / LN 60 |
| 70 | Total Firm Sales | Sum LN 62 : LN 69 |

| | | |
|---|---|---|
| 71 | **REMAINING COMMODITY COSTS EXCLD HEDGING** | |
| 72 | REMAINING COMMODITY Excld Hedging | Schedule 1B, LN 39 |
| 73 | Res Heat | LN 72 * LN 62 |
| 74 | Res General | LN 72 * LN 63 |
| 75 | G50 Low Annual-Low Winter | LN 72 * LN 64 |
| 76 | G40 Low Annual-High Winter | LN 72 * LN 65 |
| 77 | G51 Med Annual-Low Winter | LN 72 * LN 66 |
| 78 | G41 Med Annual-High Winter | LN 72 * LN 67 |
| 79 | G52 High Annual-Low Winter | LN 72 * LN 68 |
| 80 | G42 High Annual-High Winter | LN 72 * LN 69 |
| 81 | | |
| 82 | Residential | LN 73 + LN 74 |
| 83 | SALES HLF CLASSES | LN 75 + LN 77 + LN 79 |
| 84 | SALES LLF CLASSES | LN 76 + LN 78 + LN 80 |

| | | |
|---|---|---|
| 85 | **REMAINING COMMODITY HEDGING COSTS** | |
| 86 | TOTAL REMAINING COMMODITY HEDGING | Schedule 1B, LN 40 |
| 87 | Res Heat | LN 86 * LN 62 |
| 88 | Res General | LN 86 * LN 63 |
| 89 | G50 Low Annual-Low Winter | LN 86 * LN 64 |
| 90 | G40 Low Annual-High Winter | LN 86 * LN 65 |
| 91 | G51 Med Annual-Low Winter | LN 86 * LN 66 |
| 92 | G41 Med Annual-High Winter | LN 86 * LN 67 |
| 93 | G52 High Annual-Low Winter | LN 86 * LN 68 |
| 94 | G42 High Annual-High Winter | LN 86 * LN 69 |
| 95 | | |
| 96 | Residential | LN 87 + LN 88 |
| 97 | SALES HLF CLASSES | LN 89 + LN 91 + LN 93 |
| 98 | SALES LLF CLASSES | LN 90 + LN 92 + LN 94 |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Commodity Costs to Customer Classes

### Total Commodity Costs

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 99 | **TOTAL COMMODITY COSTS Excluding Hedging** | | | | | | | **Annual** | **Winter** |
| 100 | TOTAL COMMODITY Excld Hedging | $ 2,356,127 | $ 3,361,809 | $ 4,803,620 | $ 3,380,633 | $ 2,795,225 | $ 923,892 | $ 20,160,001 | $ 17,621,306 |
| 101 | Res Heat | $ 1,044,820 | $ 1,482,418 | $ 2,122,689 | $ 1,477,202 | $ 1,232,808 | $ 410,023 | $ 8,627,765 | $ 7,769,960 |
| 102 | Res General | $ 14,936 | $ 21,728 | $ 30,793 | $ 22,448 | $ 18,120 | $ 5,826 | $ 142,431 | $ 113,853 |
| 103 | G50 Low Annual-Low Winter | $ 60,770 | $ 89,729 | $ 126,393 | $ 94,622 | $ 74,951 | $ 23,619 | $ 626,658 | $ 470,085 |
| 104 | G40 Low Annual-High Winter | $ 521,367 | $ 735,624 | $ 1,055,794 | $ 726,940 | $ 611,373 | $ 204,870 | $ 4,159,163 | $ 3,855,967 |
| 105 | G51 Med Annual-Low Winter | $ 96,122 | $ 143,848 | $ 201,525 | $ 154,430 | $ 120,329 | $ 37,326 | $ 1,059,607 | $ 753,580 |
| 106 | G41 Med Annual-High Winter | $ 454,483 | $ 645,152 | $ 923,609 | $ 643,356 | $ 536,551 | $ 178,334 | $ 3,764,321 | $ 3,381,486 |
| 107 | G52 High Annual-Low Winter | $ 72,764 | $ 114,272 | $ 158,114 | $ 132,881 | $ 93,772 | $ 28,243 | $ 1,025,643 | $ 600,045 |
| 108 | G42 High Annual-High Winter | $ 90,866 | $ 129,037 | $ 184,702 | $ 128,753 | $ 107,321 | $ 35,651 | $ 754,413 | $ 676,331 |
| 109 | | | | | | | | | |
| 110 | Residential | $ 1,059,756 | $ 1,504,146 | $ 2,153,482 | $ 1,499,651 | $ 1,250,928 | $ 415,849 | $ 8,770,196 | $ 7,883,813 |
| 111 | SALES HLF CLASSES | $ 229,655 | $ 347,849 | $ 486,032 | $ 381,934 | $ 289,051 | $ 89,188 | $ 2,711,908 | $ 1,823,710 |
| 112 | SALES LLF CLASSES | $ 1,066,716 | $ 1,509,813 | $ 2,164,106 | $ 1,499,049 | $ 1,255,245 | $ 418,855 | $ 8,677,897 | $ 7,913,784 |
| 113 | **TOTAL HEDGING COMMODITY COSTS** | | | | | | | **Annual** | **Winter** |
| 114 | TOTAL HEDGING COMMODITY | $ 11,502 | $ 18,442 | $ 23,017 | $ 17,101 | $ 13,931 | $ - | $ 83,993 | $ 83,993 |
| 115 | Res Heat | $ 5,097 | $ 8,050 | $ 9,877 | $ 7,371 | $ 6,099 | $ - | $ 36,494 | $ 36,494 |
| 116 | Res General | $ 73 | $ 123 | $ 161 | $ 118 | $ 93 | $ - | $ 569 | $ 569 |
| 117 | G50 Low Annual-Low Winter | $ 298 | $ 522 | $ 706 | $ 513 | $ 393 | $ - | $ 2,432 | $ 2,432 |
| 118 | G40 Low Annual-High Winter | $ 2,541 | $ 3,954 | $ 4,775 | $ 3,580 | $ 2,999 | $ - | $ 17,849 | $ 17,849 |
| 119 | G51 Med Annual-Low Winter | $ 473 | $ 855 | $ 1,188 | $ 857 | $ 642 | $ - | $ 4,016 | $ 4,016 |
| 120 | G41 Med Annual-High Winter | $ 2,217 | $ 3,507 | $ 4,308 | $ 3,214 | $ 2,656 | $ - | $ 15,903 | $ 15,903 |
| 121 | G52 High Annual-Low Winter | $ 359 | $ 729 | $ 1,139 | $ 803 | $ 517 | $ - | $ 3,547 | $ 3,547 |
| 122 | G42 High Annual-High Winter | $ 443 | $ 702 | $ 863 | $ 644 | $ 532 | $ - | $ 3,184 | $ 3,184 |
| 123 | | | | | | | | | |
| 124 | Residential | $ 5,170 | $ 8,174 | $ 10,038 | $ 7,490 | $ 6,192 | $ - | $ 37,063 | $ 37,063 |
| 125 | SALES HLF CLASSES | $ 1,130 | $ 2,106 | $ 3,033 | $ 2,173 | $ 1,552 | $ - | $ 9,994 | $ 9,994 |
| 126 | SALES LLF CLASSES | $ 5,202 | $ 8,163 | $ 9,946 | $ 7,438 | $ 6,187 | $ - | $ 36,936 | $ 36,936 |
| 127 | TOTAL COMMODITY | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | **Winter** |
| 128 | Res Heat | $ 1,049,917 | $ 1,490,468 | $ 2,132,566 | $ 1,484,574 | $ 1,238,907 | $ 410,023 | $ 8,664,259 | $ 7,806,454 |
| 129 | Res General | $ 15,009 | $ 21,852 | $ 30,954 | $ 22,567 | $ 18,213 | $ 5,826 | $ 143,000 | $ 114,422 |
| 130 | G50 Low Annual-Low Winter | $ 61,068 | $ 90,251 | $ 127,099 | $ 95,135 | $ 75,344 | $ 23,619 | $ 629,090 | $ 472,517 |
| 131 | G40 Low Annual-High Winter | $ 523,908 | $ 739,578 | $ 1,060,569 | $ 730,520 | $ 614,372 | $ 204,870 | $ 4,177,012 | $ 3,873,816 |
| 132 | G51 Med Annual-Low Winter | $ 96,595 | $ 144,703 | $ 202,713 | $ 155,288 | $ 120,971 | $ 37,326 | $ 1,063,623 | $ 757,596 |
| 133 | G41 Med Annual-High Winter | $ 456,701 | $ 648,659 | $ 927,918 | $ 646,570 | $ 539,208 | $ 178,334 | $ 3,780,224 | $ 3,397,388 |
| 134 | G52 High Annual-Low Winter | $ 73,123 | $ 115,001 | $ 159,253 | $ 133,684 | $ 94,289 | $ 28,243 | $ 1,029,190 | $ 603,592 |
| 135 | G42 High Annual-High Winter | $ 91,309 | $ 129,739 | $ 185,565 | $ 129,397 | $ 107,853 | $ 35,651 | $ 757,597 | $ 679,515 |
| 136 | Total Firm Sales | $ 2,367,630 | $ 3,380,251 | $ 4,826,637 | $ 3,397,734 | $ 2,809,156 | $ 923,892 | $ 20,243,994 | $ 17,705,300 |
| 137 | | | | | | | | | |
| 138 | Residential | $ 1,064,926 | $ 1,512,320 | $ 2,163,520 | $ 1,507,140 | $ 1,257,120 | $ 415,849 | $ 8,807,259 | $ 7,920,876 |
| 139 | SALES HLF CLASSES | $ 230,786 | $ 349,955 | $ 489,065 | $ 384,107 | $ 290,604 | $ 89,188 | $ 2,721,902 | $ 1,833,704 |
| 140 | SALES LLF CLASSES | $ 1,071,918 | $ 1,517,976 | $ 2,174,052 | $ 1,506,487 | $ 1,261,432 | $ 418,855 | $ 8,714,833 | $ 7,950,719 |
| 141 | | | | | | | | | |
| 142 | % ALLOCATION BETWEEN SALES HLF AND LLF | | | | | | | | |
| 143 | SALES HLF CLASSES | | | | | | | | 18.74% |
| 144 | SALES LLF CLASSES | | | | | | | | 81.26% |

## Northern Utilities - NEW HAMPSHIRE DIVISION
## Allocation of Commodity Costs to Customer Classes

### Total Commodity Costs

| | | |
|---|---|---|
| 99 | **TOTAL COMMODITY COSTS Excluding Hedging** | |
| 100 | TOTAL COMMODITY Excld Hedging | Schedule 1B, LN 41 |
| 101 | Res Heat | LN 24 + LN 73 |
| 102 | Res General | LN 25 + LN 74 |
| 103 | G50 Low Annual-Low Winter | LN 26 + LN 75 |
| 104 | G40 Low Annual-High Winter | LN 27 + LN 76 |
| 105 | G51 Med Annual-Low Winter | LN 28 + LN 77 |
| 106 | G41 Med Annual-High Winter | LN 29 + LN 78 |
| 107 | G52 High Annual-Low Winter | LN 30 + LN 79 |
| 108 | G42 High Annual-High Winter | LN 31 + LN 80 |
| 109 | | |
| 110 | Residential | LN 101 + LN 102 |
| 111 | SALES HLF CLASSES | LN 103 + LN 105 + LN 107 |
| 112 | SALES LLF CLASSES | LN 104 + LN 106 + LN 108 |
| | | |
| 113 | **TOTAL HEDGING COMMODITY COSTS** | |
| 114 | TOTAL HEDGING COMMODITY | Schedule 1B, LN 42 |
| 115 | Res Heat | LN 38 + LN 87 |
| 116 | Res General | LN 39 + LN 88 |
| 117 | G50 Low Annual-Low Winter | LN 40 + LN 89 |
| 118 | G40 Low Annual-High Winter | LN 41 + LN 90 |
| 119 | G51 Med Annual-Low Winter | LN 42 + LN 91 |
| 120 | G41 Med Annual-High Winter | LN 43 + LN 92 |
| 121 | G52 High Annual-Low Winter | LN 44 + LN 93 |
| 122 | G42 High Annual-High Winter | LN 45 + LN 94 |
| 123 | | |
| 124 | Residential | LN 115 + LN 116 |
| 125 | SALES HLF CLASSES | LN 117 + LN 119 + LN 121 |
| 126 | SALES LLF CLASSES | LN 118 + LN 120 + LN 122 |
| | | |
| 127 | **TOTAL COMMODITY** | |
| 128 | Res Heat | LN 101 + LN 115 |
| 129 | Res General | LN 102 + LN 116 |
| 130 | G50 Low Annual-Low Winter | LN 103 + LN 117 |
| 131 | G40 Low Annual-High Winter | LN 104 + LN 118 |
| 132 | G51 Med Annual-Low Winter | LN 105 + LN 119 |
| 133 | G41 Med Annual-High Winter | LN 106 + LN 120 |
| 134 | G52 High Annual-Low Winter | LN 107 + LN 121 |
| 135 | G42 High Annual-High Winter | LN 108 + LN 122 |
| 136 | Total Firm Sales | Sum LN 128 : LN 135 |
| 137 | | |
| 138 | Residential | LN 128 + LN 129 |
| 139 | SALES HLF CLASSES | LN 130 + LN 132 + LN 134 |
| 140 | SALES LLF CLASSES | LN 131 + LN 133 + LN 135 |
| 141 | | |
| 142 | % ALLOCATION BETWEEN SALES HLF AND LLF | |
| 143 | SALES HLF CLASSES | LN 139 / (LN 139 + LN 140) |
| 144 | SALES LLF CLASSES | LN 140 / (LN 139 + LN 140) |

# Schedules 11A, 11B, 11C, 11D & 11E

**Northern Utilities, Inc.**
**Normal Winter Weather - Sales Service & Company Managed Sendout**
**Commodity Volumes by Supply Source (Dth)**
**November 2015 through April 2016**

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Season |
|---|---|---|---|---|---|---|---|
| **Pipeline Supplies** | | | | | | | |
| Tennessee Production | 302,527 | 369,560 | 369,560 | 345,717 | 368,973 | 344,042 | 2,100,379 |
| Chicago | 174,977 | 180,930 | 180,930 | 169,257 | 180,930 | 0 | 887,024 |
| Algonquin Receipts | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | 0 | 190,152 |
| TGP Zone 6 | 0 | 0 | 0 | 0 | 0 | 136,212 | 136,212 |
| Niagara | 63,481 | 65,597 | 65,597 | 61,364 | 65,597 | 53,714 | 375,348 |
| Iroquois Receipts | 18,325 | 18,948 | 18,948 | 17,725 | 18,948 | 0 | 92,894 |
| PNGTS Receipts | 23,916 | 24,713 | 24,713 | 23,119 | 24,713 | 29,895 | 151,069 |
| PNGTS Delivered | 149,475 | 154,458 | 154,458 | 144,493 | 154,458 | 80,717 | 838,057 |
| PNGTS Delivered (Dec - Feb) | 0 | 77,229 | 77,229 | 72,246 | 0 | 0 | 226,704 |
| Maritimes Delivered | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| Subtotal Pipeline | 995,231 | 1,162,714 | 1,162,714 | 1,087,701 | 1,084,898 | 704,579 | 6,197,838 |
| **Underground Storage** | | | | | | | |
| Tenn Zone 4 Spot | 72,768 | 75,194 | 11,423 | 0 | 194 | 72,768 | 232,348 |
| Tennessee Storage | 0 | 0 | 63,771 | 70,343 | 74,999 | 0 | 209,113 |
| Tennesse Storage Path | 72,768 | 75,194 | 75,194 | 70,343 | 75,194 | 72,768 | 441,461 |
| W10 AMA Spot | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Washington 10 Storage | 11,091 | 558,046 | 754,995 | 720,132 | 209,131 | 0 | 2,253,395 |
| W10 Storage Path | 11,091 | 558,046 | 754,995 | 720,132 | 209,131 | 0 | 2,253,395 |
| Subtotal Storage | 83,859 | 633,240 | 830,189 | 790,474 | 284,325 | 72,768 | 2,694,855 |
| **Peaking Supplies** | | | | | | | |
| Peaking Contract 1 | 0 | 0 | 12,636 | 0 | 0 | 0 | 12,636 |
| Peaking Contract 2 | 0 | 0 | 88,658 | 0 | 0 | 0 | 88,658 |
| Peaking Contract 3 | 0 | 0 | 52,332 | 0 | 0 | 0 | 52,332 |
| Peaking Contract 4 | 0 | 0 | 176,349 | 50,853 | 11,958 | 0 | 239,160 |
| LNG | 2,132 | 2,203 | 39,547 | 2,061 | 2,203 | 2,130 | 50,277 |
| Subtotal Peaking | 2,132 | 2,203 | 369,522 | 52,914 | 14,161 | 2,130 | 443,063 |
| **Total Delivered (Dth)** | 1,081,222 | 1,798,158 | 2,362,425 | 1,931,089 | 1,383,385 | 779,477 | 9,335,756 |

**Northern Utilities, Inc.**
**Desgin Winter Weather - Planning Load Sendout**
**Commodity Volumes by Supply Source (Dth)**
**November 2015 through April 2016**

| Description | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Season |
|---|---|---|---|---|---|---|---|
| **Pipeline Supplies** | | | | | | | |
| Tennessee Production | 385,863 | 406,378 | 406,378 | 380,160 | 406,378 | 392,794 | 2,377,949 |
| Chicago | 174,977 | 180,930 | 180,930 | 169,257 | 180,930 | 0 | 887,024 |
| Algonquin Receipts | 37,530 | 38,781 | 38,781 | 36,279 | 38,781 | 0 | 190,152 |
| TGP Zone 6 | 0 | 0 | 0 | 0 | 0 | 431,046 | 431,046 |
| Niagara | 69,805 | 72,132 | 72,132 | 67,478 | 72,132 | 67,478 | 421,156 |
| Iroquois Receipts | 18,325 | 18,948 | 18,948 | 17,725 | 18,948 | 0 | 92,894 |
| PNGTS Receipts | 23,916 | 24,713 | 24,713 | 23,119 | 24,713 | 29,895 | 151,069 |
| PNGTS Delivered | 149,475 | 154,458 | 154,458 | 144,493 | 154,458 | 80,717 | 838,057 |
| PNGTS Delivered (Dec-Feb) | 0 | 77,229 | 77,229 | 72,246 | 0 | 0 | 226,704 |
| Maritimes Delivered | 225,000 | 232,500 | 232,500 | 217,500 | 232,500 | 60,000 | 1,200,000 |
| Subtotal Pipeline | 1,084,890 | 1,206,067 | 1,206,067 | 1,128,257 | 1,128,839 | 1,061,930 | 6,816,050 |
| | | | | | | | |
| **Underground Storage** | | | | | | | |
| Tenn Zone 4 Spot | 79,311 | 81,955 | 31,418 | 0 | 47 | 79,311 | 272,043 |
| Tennessee Storage | 0 | 0 | 50,537 | 76,668 | 81,908 | 0 | 209,113 |
| Tennesse Storage Path | 79,311 | 81,955 | 81,955 | 76,668 | 81,955 | 79,311 | 481,156 |
| W10 AMA Spot | 288,992 | 0 | 0 | 0 | 156,096 | 0 | 445,088 |
| Washington 10 Storage | 0 | 777,812 | 854,877 | 873,246 | 571,373 | 0 | 3,077,307 |
| W10 Storage Path | 288,992 | 777,812 | 854,877 | 873,246 | 727,469 | 0 | 3,522,395 |
| Subtotal Storage | 368,303 | 859,767 | 936,832 | 949,914 | 809,424 | 79,311 | 4,003,551 |
| | | | | | | | |
| **Peaking Supplies** | | | | | | | |
| Peaking Contract 1 | 0 | 12,112 | 22,442 | 0 | 1,642 | 0 | 36,195 |
| Peaking Contract 2 | 0 | 0 | 123,696 | 19,072 | 2,357 | 0 | 145,125 |
| Peaking Contract 3 | 0 | 0 | 80,094 | 19,906 | 0 | 0 | 100,000 |
| Peaking Contract 4 | 0 | 0 | 168,896 | 70,264 | 0 | 0 | 239,160 |
| LNG | 2,132 | 29,503 | 2,203 | 61,060 | 14,907 | 2,130 | 111,936 |
| Subtotal Peaking | 2,132 | 41,615 | 397,332 | 170,302 | 18,906 | 2,130 | 632,416 |
| | | | | | | | |
| **Total Delivered (Dth)** | 1,455,326 | 2,107,449 | 2,540,231 | 2,248,472 | 1,957,168 | 1,143,371 | 11,452,017 |

**Northern Utilities, Inc.**
**Normal Winter Weather - Sales Service & Company Managed Sendout**
**Capacity Utilization by Supply Source**
**November 2015 through April 2016**

| Description | Projected Volume (Dth) | Maximum Volume (Dth) | Capacity Utilization |
|---|---|---|---|
| **Pipeline Supplies** | | | |
| Tennessee Production | 2,100,379 | 2,183,367 | 96% |
| Chicago & Iroquois Receipts | 979,917 | 1,170,988 | 84% |
| Algonquin Receipts | 190,152 | 227,682 | 84% |
| TGP Zone 6 | 136,212 | 136,212 | 100% |
| Niagara | 375,348 | 387,573 | 97% |
| PNGTS Receipts | 151,069 | 199,472 | 76% |
| PNGTS Delivered | 838,057 | 838,057 | 100% |
| PNGTS Delivered (Dec - Feb) | 226,704 | 226,704 | 100% |
| Maritimes Delivered | 1,200,000 | 1,200,000 | 100% |
| Subtotal Pipeline | 6,197,838 | 6,570,055 | 94% |
| **Underground Storage** | | | |
| Tenn Zone 4 Spot | 232,348 | | |
| Tennessee Storage | 209,113 | | |
| Tennesse Storage Path | 441,461 | 441,448 | 100% |
| W10 AMA Spot | 0 | | |
| Washington 10 Storage | 2,253,395 | | |
| W10 Storage Path | 2,253,395 | 4,998,520 | 45% |
| Subtotal Storage | 2,694,855 | 5,439,968 | 50% |
| **Peaking Supplies** | | | |
| Peaking Contract 1 | 12,636 | 149,475 | 8% |
| Peaking Contract 2 | 88,658 | 88,658 | 100% |
| Peaking Contract 3 | 52,332 | 52,332 | 100% |
| Peaking Contract 4 | 239,160 | 239,160 | 100% |
| LNG | 50,277 | 125,000 | 40% |
| Subtotal Peaking | 443,063 | 654,625 | 68% |
| **Total Delivered (Dth)** | 9,335,756 | 12,664,647 | 74% |

| Northern Utilities, Inc.<br>Desgin Winter Weather - Planning Load Sendout<br>Capacity Utilization by Supply Source<br>November 2015 through April 2016 | | | |
|---|---|---|---|
| Description | Projected Volume (Dth) | Maximum Volume (Dth) | Capacity Utilization |
| **Pipeline Supplies** | | | |
| Tennessee Production | 2,377,949 | 2,385,838 | 100% |
| Chicago & Iroquois Receipts | 979,917 | 1,170,988 | 84% |
| Algonquin Receipts | 190,152 | 227,682 | 84% |
| TGP Zone 6 | 431,046 | 431,046 | 100% |
| Niagara | 421,156 | 423,514 | 99% |
| PNGTS Receipts | 151,069 | 199,472 | 76% |
| PNGTS Delivered | 838,057 | 838,057 | 100% |
| PNGTS Delivered (Dec-Feb) | 226,704 | 226,704 | 100% |
| Maritimes Delivered | 1,200,000 | 1,200,000 | 100% |
| Subtotal Pipeline | 6,816,050 | 7,103,301 | 96% |
| **Underground Storage** | | | |
| Tenn Zone 4 Spot | 272,043 | | |
| Tennessee Storage | 209,113 | | |
| Tennesse Storage Path | 481,156 | 481,208 | 100% |
| W10 AMA Spot | 445,088 | | |
| Washington 10 Storage | 3,077,307 | | |
| W10 Storage Path | 3,522,395 | 4,998,520 | 70% |
| Subtotal Storage | 4,003,551 | 5,479,728 | 73% |
| **Peaking Supplies** | | | |
| Peaking Contract 1 | 36,195 | 149,475 | 24% |
| Peaking Contract 2 | 145,125 | 145,125 | 100% |
| Peaking Contract 3 | 100,000 | 100,000 | 100% |
| Peaking Contract 4 | 239,160 | 239,160 | 100% |
| LNG | 111,936 | 125,000 | 90% |
| Subtotal Peaking | 632,416 | 758,760 | 83% |
| **Total Delivered (Dth)** | 11,452,017 | 13,341,788 | 86% |

Northern Utilities Inc.
Forecast of Upcoming Winter Period Design Day Report
2015 / 2016 Winter Period
(Therms)

| | |
|---|---|
| Demand | |
| NH Firm Sales | 439,520 |
| NH Non-Capacity Exempt Transportation | 104,280 |
| NH Capacity Exempt Transportation | 109,240 |
| NH Interruptible Sales | 0 |
| NH Interruptible Transportation | 0 |
| | |
| NH Design Day Demand | 653,040 |
| | |
| ME Firm Sales | 547,690 |
| ME Non-Capacity Exempt Transportation | 102,250 |
| ME Capacity Exempt Transportation | 170,050 |
| ME Interruptible Sales | 0 |
| ME Interruptible Transportation | 0 |
| | |
| ME Design Day Demand | 819,990 |
| | |
| Total Firm Sales | 987,210 |
| Total Non-Capacity Exempt Transportation | 206,530 |
| Total Capacity Exempt Transportation | 279,290 |
| Total Interruptible Sales | 0 |
| Total Interruptible Transportation | 0 |
| | |
| Total Design Day Demand | 1,473,030 |
| | |
| Supplies | |
| Capacity Exempt Transportation | 279,290 |
| Pipeline | 391,650 |
| Storage | 355,290 |
| On-System LNG | 41,810 |
| Off-System Peaking | 418,790 |
| On-System Propane | 0 |
| | |
| Total | 1,486,830 |

| | |
|---|---|
| Effective Degree Day | |
| New Hampshire | 78.7 |
| Maine | 78.8 |
| Probability | 1 in 30 |

| | |
|---|---|
| Report Prepared By | Francis X. Wells |
| Title | Manager, Energy Planning |
| Signature | Francis X Wells |

**Northern Utilities Inc.**
**New Hampshire 7 Day Cold Snap Analysis**
**Winter 2015-2016**

**Coldest 7 Consecutive Days**
Based on historic Portsmouth weather data

| Date | EDD |
|---|---|
| February 11, 1979 | 68 |
| February 12, 1979 | 60 |
| February 13, 1979 | 73 |
| February 14, 1979 | 73 |
| February 15, 1979 | 64 |
| February 16, 1979 | 69 |
| February 17, 1979 | 72 |
| Total | 479 |

**Maximum Projected Design Week Demand (Dth)**

| | |
|---|---|
| Daily Baseload | 12,896 |
| Weekly Baseload | 90,270 |
| Heating Increment | 474 |
| Effective Degree Days | 479 |
| Total Heat Load | 226,927 |
| | |
| Projected Cold Snap Demand | 317,197 |

| | |
|---|---|
| **New Hampshire Allocation** | **42.42%** |

Based on the latest demand cost allocator in the Winter COG filing.

**Maximum Supply Capability (Dth)**

| | |
|---|---|
| Amount to be Supplied by Natural Gas Pipelines | |
| Chicago City-Gates & Iroquois Receipts | 6,434 |
| PNGTS Receipts | 1,096 |
| Tennessee Niagara | 2,327 |
| Tennessee Production | 13,109 |
| Algonquin Receipt Points Supply | 1,251 |
| Maritimes Delivered Baseload Supply | 7,474 |
| PNGTS Delivered Baseload Supply - (Nov - Mar) | 4,983 |
| PNGTS Delivered Baseload Supply - (Dec - Feb) | 2,491 |
| Tennessee Firm Storage | 2,644 |
| Washington 10 Storage | 32,885 |
| Peaking Contract 1 | 9,965 |
| Peaking Contract 2 | 14,948 |
| Peaking Contract 3 | 5,000 |
| Peaking Contract 4 | 11,966 |
| Total Daily Pipeline | 116,573 |
| Pipeline for 7 days | 816,011 |
| | |
| New Hampshire Allocation | 346,152 |

**Available LNG Storage**

| Facility | Gallons | Dth |
|---|---|---|
| Lewiston LNG | 145,134 | 12,140 |
| Total | 145,134 | 12,140 |
| | | |
| New Hampshire Allocation - 7 Days | | 5,150 |

**LNG Delivery Contract**

Northern Utilities plans to secure a contract for LNG Delivery for up to three loads of LNG per day.

The storage credit for LNG is calculated as follows:

| | |
|---|---|
| Number of Days | 5 |
| Number of Loads | 3 |
| Delivery Reliability | 70% |
| Assumed Number of LNG Deliveries | 11 |
| Dth Per Load | 900 |
| Total Storage Credit | 9,450 |
| NH Storage Credit - 7 Days | 4,009 |

| **Summary** | |
|---|---|
| Maximum projected design week demand | 317,197 |
| Amount to be furnished by natural gas pipeline | 346,152 |
| Remaining Balance | -28,955 |
| Storage available | 5,150 |
| Credit from LNG delivery supply contract | 4,009 |
| Total available storage and propane deliveries | 9,158 |
| **Net Surplus/(Deficiency)** | **38,113** |

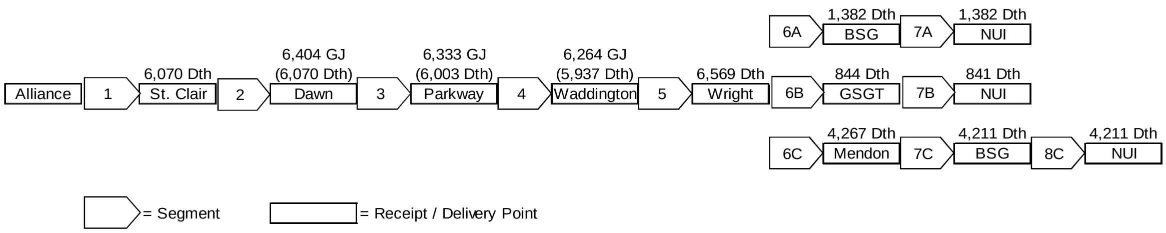
| | |
|---|---|
| Report Prepared By | Francis X. Wells |
| Title | Manager, Energy Planning |
| Signature | Fran X Wells |

# Schedule 12

| Northern Capacity by Supply Source (Dth per Day) | | |
|---|---|---|
| Supply Source | Nov 2015 through Mar 2016 | Apr 2016 through Oct 2016 |
| Chicago City-Gates & Iroquois Receipts | 6,434 | 6,434 |
| PNGTS Receipts | 1,096 | 1,096 |
| Tennessee Niagara | 2,327 | 2,327 |
| Tennessee Production | 13,109 | 13,109 |
| Algonquin Receipt Points Supply | 1,251 | 1,251 |
| Maritimes Delivered Baseload Supply | 7,474 | 0 |
| PNGTS Delivered Baseload Supply - (Nov - Mar) | 4,983 | 0 |
| PNGTS Delivered Baseload Supply - (Dec - Feb) | 2,491 | 0 |
| Tennessee Firm Storage | 2,644 | 2,644 |
| Washington 10 Storage | 32,885 | 0 |
| Peaking Contract 1 | 9,965 | 0 |
| Peaking Contract 2 | 14,948 | 0 |
| Peaking Contract 3 | 5,000 | 0 |
| Peaking Contract 4 | 11,966 | 0 |
| Lewiston On-System LNG Production | 4,181 | 4,181 |
| **Total Deliverable Resources** | **120,754** | **31,042** |

## Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply: Chicago City-Gate & Iroquois Receipts

### Capacity Path Diagram

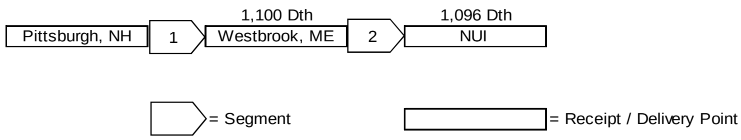



### Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Transportation | Vector | FT-1-NUI-0122 | FT-1 | 3/31/2016 | 6,070 | Dth | Year-Round | Alliance Pipeline Interconnect | St. Clair | |
| 2 | Transportation | Vector | FT-1-NUI-C0122 | FT-1 | 3/31/2016 | 6,404 | GJ | Year-Round | St. Clair | Dawn | Union |
| 3 | Transportation | Union | M12205 | M12 | 10/31/2017 | 6,333 | GJ | Year-Round | Dawn | Parkway | TransCanada |
| 4 | Transportation | TransCanada | 41235 | FT | 10/31/2017 | 6,264 | GJ | Year-Round | Parkway | Waddington | Iroquois |
| 5 | Transportation | Iroquois | R181001 | RTS-1 | 10/31/2017 | 6,569 | Dth | Year-Round | Waddington | Wright | Tennessee |
| 6A | Transportation | Tennessee | 95196 | FT-A | 10/31/2017 | 1,382 | Dth | Year-Round | Wright | Bay State City Gate | |
| 7A | Exchange | Bay State Gas | NA | NA | Renewal Clause | 1,382 | Dth | Year-Round | Bay State City Gate | Northern City Gates | |
| 6B | Transportation | Tennessee | 95196 | FT-A | 10/31/2017 | 844 | Dth | Year-Round | Wright | Pleasant St. | Granite |
| 7B | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 841 | Dth | Year-Round | Granite | Northern City Gates | |
| 6C | Transportation | Tennessee | 41099 | FT-A | 10/31/2017 | 4,267 | Dth | Year-Round | Wright | Mendon | Algonquin |
| 7C | Transportation | Algonquin | 93200F | AFT-1 | 10/31/2016 | 4,211 | Dth | Year-Round | Mendon | Bay State City Gate | |
| 8C | Exchange | Bay State Gas | NA | NA | Renewal Clause | 4,211 | Dth | Year-Round | Bay State City Gate | Northern City Gates | |
| Total Path Deliverable | | | | | | 6,434 | Dth | | | | |

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply:  PNGTS Receipts

Capacity Path Diagram

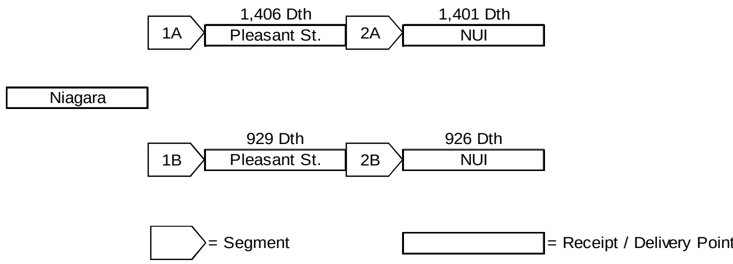



Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Transportation | PNGTS | 1997-003 | FT | 3/9/2019 | 1,100 | Dth | Year-Round | Pittsburgh, NH | Westbrook, ME | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 1,096 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 1,096 | Dth | | | | |

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Niagara (Interconnection of TransCanada and Tennessee Pipelines)

Capacity Path Diagram

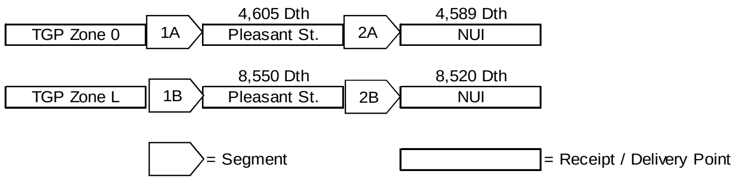



Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | Transportation | Tennessee | 5292 | FT-A | 3/31/2020 | 1,406 | Dth | Year-Round | Niagara | Pleasant St. | Granite |
| 2A | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 1,401 | Dth | Year-Round | Granite | Northern City Gates | |
| 1B | Transportation | Tennessee | 39735 | FT-A | 3/31/2020 | 929 | Dth | Year-Round | Niagara | Pleasant St. | Granite |
| 2B | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 926 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 2,327 | Dth | | | | |

## Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply:  Tennessee Production Area

### Capacity Path Diagram



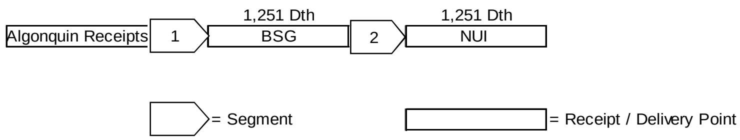

### Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A[1] | Transportation | Tennessee | 5083 | FT-A | 10/31/2018 | 4,605 | Dth | Year-Round | Zone 0, 100 Leg | Pleasant St. | Granite |
| 2A | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 4,589 | Dth | Year-Round | Granite | Northern City Gates | |
| 1B[1] | Transportation | Tennessee | 5083 | FT-A | 10/31/2018 | 8,550 | Dth | Year-Round | Zone L, 500 & 800 Legs | Pleasant St. | Granite |
| 2B | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 8,520 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 13,109 | Dth | | | | |

Note 1:  Tennessee Contract No. 5083 also allows for firm delivery rights to Bay State Gas city gates.  As such, Tennessee Production could also be delivered to Northern City Gates via the Bay State Exchange.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Algonquin Receipt Points

Capacity Path Diagram

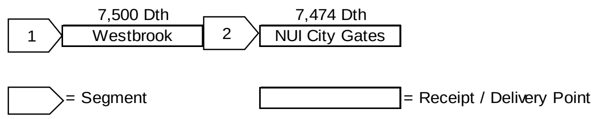



Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Transportation | Algonquin | 93201A1C | AFT-1 (F-2/F-3) | 10/31/2016 | 1,251 | Dth | Year-Round | Algonquin Receipt Points | Bay State City Gate | |
| 2 | Exchange | Bay State Gas | NA | NA | Renewal Clause | 1,251 | Dth | Year-Round | Bay State City Gate | Northern City Gates | |
| Total Path Deliverable | | | | | | 1,251 | Dth | | | | |

## Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply: Maritimes Delivered Baseload Supply

### Capacity Path Diagram

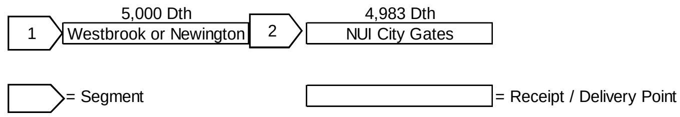



### Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Delivered Supply | Confidential | NA | NA | 3/31/2016 | 7,500 | Dth | Winter Only (Nov - Mar) | NA | Westbrook | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 7,474 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 7,474 | Dth | | | | |

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: PNGTS Delivered Baseload Supply

Capacity Path Diagram

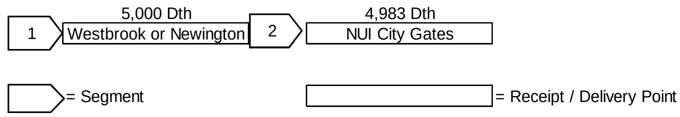



Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Delivered Supply | Confidential | NA | NA | 3/31/2016 | 5,000 | Dth | Winter Only (Nov - Mar) | NA | Westbrook or Newington | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 4,983 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 4,983 | Dth | | | | |

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: PNGTS Delivered Baseload Supply

Capacity Path Diagram

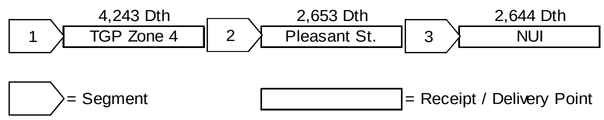



Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Delivered Supply | Confidential | NA | NA | 2/29/2016 | 2,500 | Dth | Winter Only (Nov - Mar) | NA | Westbrook or Newington | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 2,491 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 2,491 | Dth | | | | |

## Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply: Tennessee Firm Storage - Market Area

### Capacity Path Diagram




### Capacity Path Detail

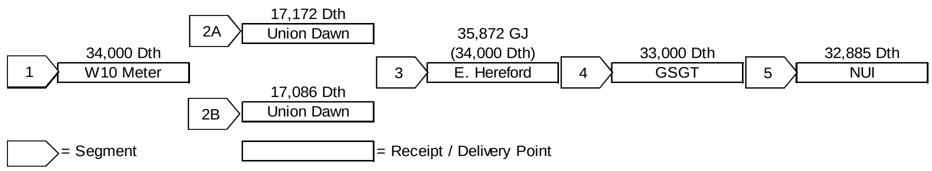
| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Storage | Tennessee | 5195 | FS-MA | 3/31/2020 | 4,243 | Dth | Year-Round | NA | TGP Zone 4 | Tennessee |
| 2[2] | Transportation | Tennessee | 5265 | FT-A | 3/31/2020 | 2,653 | Dth | Year-Round | TGP Zone 4 | Pleasant St. | Granite |
| 3 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 2,644 | Dth | Year-Round | Pleasant St. | Northern City Gates | |
| Total Path Deliverable | | | | | | 2,644 | Dth | | | | |

Note 1: Tennessee Contract No. 5195 has a maximum storage quantity of 259,337 Dth.

Note 2: Tennessee Contract No. 5265 also allows for firm delivery rights to Bay State Gas city gates. As such, Tennessee Firm Storage could also be delivered to Northern City Gates via the Bay State Exchange.

# Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply: Washington 10 Storage

### Capacity Path Diagram




### Capacity Path Detail

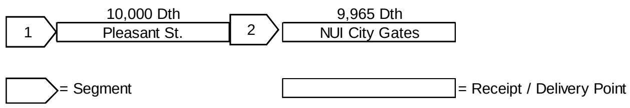
| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Storage | Washington 10 | 01052 | Firm Storage | 3/31/2018 | 34,000 | Dth | Year-Round | NA | W10 Withdrawal Meter | Vector |
| 2A[2] | Transportation | Vector | CRL-NUI-0725 | FT | 3/31/2018 | 17,172 | Dth | Year-Round | W10 Withdrawal Meter | Union Dawn | TransCanada |
| 2B | Transportation | Vector | CRL-NUI-0727 | FT | 3/31/2018 | 17,086 | Dth | Winter Only (Nov - Mar) | W10 Withdrawal Meter | Union Dawn | TransCanada |
| 3 | Transportation | TransCanada | 33322 | FT | 3/31/2018 | 35,872 | GJ | Year-Round | Union Dawn | East Hereford | PNGTS |
| 4 | Transportation | PNGTS | 1997-004 | FT | 3/9/2019 | 33,000 | Dth | Winter Only (Nov - Mar) | Pittsburgh, NH | Granite | Granite |
| 5 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 32,885 | Dth | Year-Round | Granite | Northern City Gates | |
| Total Path Deliverable | | | | | | 32,885 | Dth | | | | |

Note 1: Washington 10 Contract 01052 has a maximum storage quantity of 3,400,000 Dth.

Note 2: Vector Contract No. CRL-NUI-0725 allows for receipt from the Alliance Interconnect (Chicago). Gas is received on this contract at the W10 Withdrawal meter on a secondary, firm basis. This capacity is used for summer refill of the Washington 10 storage contract.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply:  Peaking Contract 1

Capacity Path Diagram




Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Peaking Supply | Confidential | NA | NA | 3/31/2016 | 10,000 | Dth | Winter Only (Nov - Mar) | NA | TGP Pleasant St. | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 9,965 | Dth | Year-Round | TGP Pleasant St. | Northern City Gates | |
| Total Path Deliverable | | | | | | 9,965 | Dth | | | | |

Note 1:  Peaking Contract 1 allows Northern to nominate up to 10,000 Dth per Day and up to 150,000 Dth from November 2015 through March 2016.  Full contract volume (10,000 Dth) may also be delivered to Lawrence (Bay State), Agawam (Bay State) and/or Salem (GSGT) meters.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply:  Peaking Contract 2

Capacity Path Diagram

| 1 | 15,000 Dth<br>Westbrook or Newington | 2 | 14,948 Dth<br>NUI City Gates |
|---|---|---|---|

= Segment          = Receipt / Delivery Point

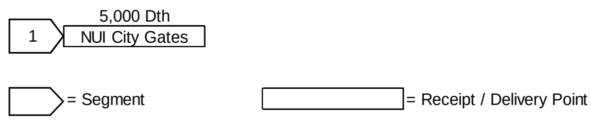
Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Peaking Supply | Confidential | NA | NA | 3/31/2016 | 15,000 | Dth | Winter Only (Nov - Mar) | NA | PNGTS Westbrook or Newington | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 14,948 | Dth | Year-Round | PNGTS Westbrook or Newington | Northern City Gates | |
| Total Path Deliverable | | | | | | 14,948 | Dth | | | | |

Note 1:  Peaking Contract 2 allows Northern to nominate up to 15,000 Dth per Day and up to 300,000 Dth from November 2015 through March 2016.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Peaking Contract 3

Capacity Path Diagram



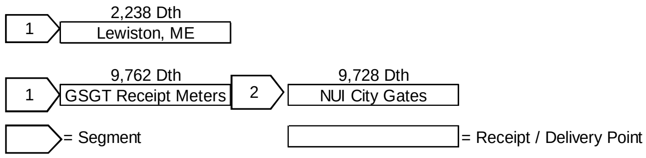

Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Peaking Supply | Confidential | NA | NA | 3/31/2016 | 5,000 | Dth | Winter Only (Nov - Mar) | NA | Northern City Gates | |
| Total Path Deliverable | | | | | | 5,000 | Dth | | | | |

Note 1: Peaking Contract 3 allows Northern to nominate up to 5,000 Dth per Day and 100,000 Dth from November 2015 through March 2016.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Peaking Contract 4

Capacity Path Diagram



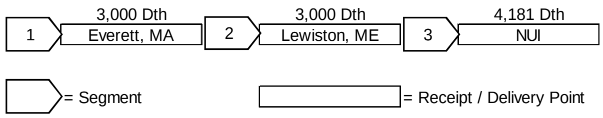

Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | Peaking Supply | Confidential | NA | NA | 3/31/2016 | 2,238 | Dth | Winter Only (Nov - Mar) | NA | Northern City Gates | |
| 1[1] | Peaking Supply | Confidential | NA | NA | 3/31/2016 | 9,762 | Dth | Winter Only (Nov - Mar) | NA | PNGTS Westbrook, PNGTS Newington or TGP Pleasant St. | Granite |
| 2 | Transportation | Granite | 16-100-FT-NN | FT-NN | 10/31/2016 | 9,728 | Dth | Year-Round | PNGTS Westbrook, PNGTS Newington or TGP Pleasant St. | Northern City Gates | |
| Total Path Deliverable | | | | | | 11,966 | Dth | | | | |

Note 1: Peaking Contract 4 allows Northern to nominate up to 12,000 Dth per Day and 240,000 Dth from November 2015 through March 2016. Northern may take the full 12,000 Dth to any of the GSGT Receipt Meters or NUI Lewiston delivery meters.

## Northern Utilities, Inc.
## Capacity Path Diagram and Detail
## Source of Supply: Lewiston LNG Plant

### Capacity Path Diagram




### Capacity Path Detail

| Segment | Product | Vendor | Contract ID | Rate Schedule | Contract Termination Date | Northern MDQ | Dth / GJ | Availability | Receipt Point | Delivery Point | Interconnecting Pipeline |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1[1] | LNG Contract | Confidential | NA | NA | 10/31/2016 | 3,000 | Dth | Year-Round | NA | Everett, MA | NA |
| 2 | LNG Trucking Contract | Confidential | | | 10/31/2016 | 3,000 | Dth | Year-Round | Everett, MA | Lewiston, ME | NA |
| 3 | Lewiston LNG Plant | N/A | NA | NA | N/A | 4,181 | Dth | Year-Round | Lewiston, ME | Northern Distribution System | |
| Total Path Deliverable | | | | | | 4,181 | Dth | | | | |

Note 1: The LNG Contract allows Northern to nominate up to 3,000 Dth per day (3 trucks) with an annual maximum take is 125,000 Dth.

# Schedule 13

Northern Utilities, Inc.
New Hampshire Division
Migration to Transportation Only Service by Rate Class
November 2015 through October 2016

| C&I Rate Class | Annual Sales Service Deliveries (Dth) | Percentage of Sales Service Total by Rate Class | Sales Service Percentage by Rate Class |
|---|---|---|---|
| G40 | 855,695 | 35% | 86% |
| G50 | 147,076 | 6% | 82% |
| G41 | 792,207 | 32% | 60% |
| G51 | 255,428 | 10% | 50% |
| G42 | 158,990 | 6% | 24% |
| G52 | 269,247 | 11% | 16% |
| Special Contracts | - | 0% | 0% |
| Total C&I | 2,478,644 | 100% | 38% |

| C&I Rate Class | Annual Transport-Only Deliveries (Dth) | Percentage of Transport Only Total by Rate Class | Transportation Service Percentage by Rate Class |
|---|---|---|---|
| T40 | 142,769 | 4% | 14% |
| T50 | 31,898 | 1% | 18% |
| T41 | 527,579 | 13% | 40% |
| T51 | 257,259 | 6% | 50% |
| T42 | 496,255 | 12% | 76% |
| T52 | 1,456,396 | 37% | 84% |
| Special Contracts | 1,069,387 | 27% | 100% |
| Total C&I | 3,981,543 | 100% | 62% |

| C&I Rate Class | Annual Total Deliveries (Dth) | Percentage of Total by Rate Class |
|---|---|---|
| G/T40 | 998,464 | 15% |
| G/T50 | 178,974 | 3% |
| G/T41 | 1,319,786 | 20% |
| G/T51 | 512,687 | 8% |
| G/T42 | 655,245 | 10% |
| G/T52 | 1,725,643 | 27% |
| Special Contracts | 1,069,387 | 17% |
| Total C&I | 6,460,186 | 100% |

# Schedule 14

# Northern Utilities, Inc.
## Storage Inventory and Activity Costs

### Tennessee Storage

| Month | Beginning Inventory Volume | Injections | Withdrawals | Ending Inventory Volume | Beginning Inventory Cost | Beginning Inventory Rate | Injection Rate | Injected Value | Withdrawal Rate | Withdrawn Value | Ending Inventory Value | Interest Rate | Carrying Costs | Ending Inventory Value Excluding Carrying Costs | Withdrawn Value plus Charges |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 237,942 | - | - | 237,942 | $ 399,742 | $ 1.68 | NA | $ - | $ 1.68 | $ - | $ 399,742 | 2.19% | $ 728 | $ 399,742 | $ - |
| Dec-15 | 237,942 | - | - | 237,942 | $ 399,742 | $ 1.68 | NA | $ - | $ 1.68 | $ - | $ 399,742 | 2.19% | $ 728 | $ 399,742 | $ - |
| Jan-16 | 237,942 | - | 64,563 | 173,379 | $ 399,742 | $ 1.68 | NA | $ - | $ 1.68 | $ 108,465 | $ 291,277 | 2.19% | $ 629 | $ 291,277 | $ 108,465 |
| Feb-16 | 173,379 | - | 71,216 | 102,163 | $ 291,277 | $ 1.68 | NA | $ - | $ 1.68 | $ 119,644 | $ 171,633 | 2.19% | $ 422 | $ 171,633 | $ 119,644 |
| Mar-16 | 102,163 | - | 75,931 | 26,231 | $ 171,633 | $ 1.68 | NA | $ - | $ 1.68 | $ 127,564 | $ 44,069 | 2.19% | $ 196 | $ 44,069 | $ 127,564 |
| Apr-16 | 26,231 | 29,679 | - | 55,910 | $ 44,069 | $ 1.68 | $ 2.03 | $ 60,258 | $ 1.87 | $ - | $ 104,327 | 2.19% | $ 135 | $ 104,327 | $ - |
| May-16 | 55,910 | 30,668 | - | 86,579 | $ 104,327 | $ - | $ 1.72 | $ 52,657 | $ 1.81 | $ - | $ 156,984 | 2.19% | $ 238 | $ 156,984 | $ - |
| Jun-16 | 86,579 | 29,679 | - | 116,258 | $ 156,984 | $ 1.81 | $ 1.79 | $ 53,058 | $ 1.81 | $ - | $ 210,042 | 2.19% | $ 334 | $ 210,042 | $ - |
| Jul-16 | 116,258 | 30,668 | - | 146,926 | $ 210,042 | $ 1.81 | $ 1.82 | $ 55,757 | $ 1.81 | $ - | $ 265,799 | 2.19% | $ 433 | $ 265,799 | $ - |
| Aug-16 | 146,926 | 30,668 | - | 177,594 | $ 265,799 | $ 1.81 | $ 1.74 | $ 53,277 | $ 1.80 | $ - | $ 319,076 | 2.19% | $ 533 | $ 319,075 | $ - |
| Sep-16 | 177,594 | 29,679 | - | 207,273 | $ 319,076 | $ 1.80 | $ 1.60 | $ 47,358 | $ 1.77 | $ - | $ 366,434 | 2.19% | $ 624 | $ 366,433 | $ - |
| Oct-16 | 207,273 | 30,668 | - | 237,942 | $ 366,434 | $ 1.77 | $ 1.70 | $ 52,037 | $ 1.76 | $ - | $ 418,471 | 2.19% | $ 715 | $ 418,470 | $ - |

### Washington 10 Storage

| Month | Beginning Inventory Volume | Injections | Withdrawals | Ending Inventory Volume | Beginning Inventory Cost | Beginning Inventory Rate | Injection Rate | Injected Value | Withdrawal Rate | Withdrawn Value | Ending Inventory Value | Interest Rate | Carrying Costs | Ending Inventory Value Excluding Carrying Costs | Withdrawn Value plus Charges |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 3,400,000 | - | 11,431 | 3,388,569 | $10,893,600 | $ 3.20 | NA | $ - | $ 3.20 | $ 36,625 | $ 10,856,975 | 2.19% | | $ 10,856,975 | $ 36,625 |
| Dec-15 | 3,388,569 | - | 575,174 | 2,813,395 | $10,856,975 | $ 3.20 | NA | $ - | $ 3.20 | $1,842,856 | $ 9,014,119 | 2.19% | | $ 9,014,119 | $1,842,856 |
| Jan-16 | 2,813,395 | - | 778,167 | 2,035,229 | $ 9,014,119 | $ 3.20 | NA | $ - | $ 3.20 | $2,493,246 | $ 6,520,873 | 2.19% | | $ 6,520,873 | $2,493,246 |
| Feb-16 | 2,035,229 | - | 742,234 | 1,292,995 | $ 6,520,873 | $ 3.20 | NA | $ - | $ 3.20 | $2,378,117 | $ 4,142,756 | 2.19% | | $ 4,142,756 | $2,378,117 |
| Mar-16 | 1,292,995 | - | 215,550 | 1,077,445 | $ 4,142,756 | $ 3.20 | NA | $ - | $ 3.20 | $ 690,622 | $ 3,452,134 | 2.19% | | $ 3,452,134 | $ 690,622 |
| Apr-16 | 1,077,445 | - | - | 1,077,445 | $ 3,452,134 | $ 3.20 | NA | | $ 3.20 | $ - | $ 3,452,134 | 2.19% | | $ 3,452,134 | $ - |
| May-16 | 1,077,445 | 506,430 | - | 1,583,875 | $ 3,452,134 | $ 3.20 | $ 2.82 | $1,429,908 | $ 3.08 | $ - | $ 4,882,042 | 2.19% | | $ 4,882,042 | $ - |
| Jun-16 | 1,583,875 | 506,430 | - | 2,090,305 | $ 4,882,042 | $ 3.08 | $ 2.75 | $1,394,289 | $ 3.00 | $ - | $ 6,276,330 | 2.19% | | $ 6,276,330 | $ - |
| Jul-16 | 2,090,305 | 523,311 | - | 2,613,616 | $ 6,276,330 | $ 3.00 | $ 2.82 | $1,477,920 | $ 2.97 | $ - | $ 7,754,250 | 2.19% | | $ 7,754,250 | $ - |
| Aug-16 | 2,613,616 | - | - | 2,613,616 | $ 7,754,250 | $ 2.97 | NA | $ - | $ 2.97 | $ - | $ 7,754,250 | 2.19% | | $ 7,754,250 | $ - |
| Sep-16 | 2,613,616 | 263,073 | - | 2,876,689 | $ 7,754,250 | $ 2.97 | $ 2.83 | $ 745,155 | $ 2.95 | $ - | $ 8,499,406 | 2.19% | | $ 8,499,406 | $ - |
| Oct-16 | 2,876,689 | 523,311 | - | 3,400,000 | $ 8,499,406 | $ 2.95 | $ 2.83 | $1,479,141 | $ 2.93 | $ - | $ 9,978,547 | 2.19% | | $ 9,978,547 | $ - |

### LNG Storage

| Month | Beginning Inventory Volume | Injections | Withdrawals | Ending Inventory Volume | Beginning Inventory Cost | Beginning Inventory Rate | Injection Rate | Injected Value | Withdrawal Rate | Withdrawn Value | Ending Inventory Value | Interest Rate | Carrying Costs | Ending Inventory Value Excluding Carrying Costs | Withdrawn Value plus Charges |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov-15 | 12,000 | 932 | 2,132 | 10,800 | $ 126,000 | $ 10.50 | $10.55 | $ 9,834 | $ 10.50 | $ 22,397 | $ 113,437 | 2.19% | $ 218 | $ 113,437 | $ 22,397 |
| Dec-15 | 10,800 | 3,403 | 2,203 | 12,000 | $ 113,437 | $ 10.50 | $ 9.97 | $ 33,932 | $ 10.38 | $ 22,862 | $ 124,508 | 2.19% | $ 217 | $ 124,508 | $ 22,862 |
| Jan-16 | 12,000 | 38,347 | 39,547 | 10,800 | $ 124,508 | $ 10.38 | $12.98 | $ 497,744 | $ 12.36 | $ 488,771 | $ 133,480 | 2.19% | $ 235 | $ 133,480 | $ 488,771 |
| Feb-16 | 10,800 | 2,061 | 2,061 | 10,800 | $ 133,480 | $ 12.36 | $12.84 | $ 26,466 | $ 12.44 | $ 25,634 | $ 134,312 | 2.19% | $ 244 | $ 134,312 | $ 25,634 |
| Mar-16 | 10,800 | 2,203 | 2,203 | 10,800 | $ 134,312 | $ 12.44 | $10.85 | $ 23,900 | $ 12.17 | $ 26,809 | $ 131,404 | 2.19% | $ 242 | $ 131,404 | $ 26,809 |
| Apr-16 | 10,800 | 3,330 | 2,130 | 12,000 | $ 131,404 | $ 12.17 | $10.69 | $ 35,584 | $ 11.82 | $ 25,172 | $ 141,816 | 2.19% | $ 249 | $ 141,816 | $ 25,172 |
| May-16 | 12,000 | 2,201 | 2,201 | 12,000 | $ 141,816 | $ 11.82 | $10.70 | $ 23,545 | $ 11.64 | $ 25,629 | $ 139,732 | 2.19% | $ 256 | $ 139,732 | $ 25,629 |
| Jun-16 | 12,000 | 2,130 | 2,130 | 12,000 | $ 139,732 | $ 11.64 | $10.73 | $ 22,859 | $ 11.51 | $ 24,509 | $ 138,081 | 2.19% | $ 253 | $ 138,081 | $ 24,509 |
| Jul-16 | 12,000 | 2,201 | 2,201 | 12,000 | $ 138,081 | $ 11.51 | $10.77 | $ 23,697 | $ 11.39 | $ 25,074 | $ 136,705 | 2.19% | $ 250 | $ 136,705 | $ 25,074 |
| Aug-16 | 12,000 | 1,001 | 2,201 | 10,800 | $ 136,705 | $ 11.39 | $10.79 | $ 10,800 | $ 11.35 | $ 24,972 | $ 122,533 | 2.19% | $ 236 | $ 122,533 | $ 24,972 |
| Sep-16 | 10,800 | 3,330 | 2,130 | 12,000 | $ 122,533 | $ 11.35 | $10.78 | $ 35,891 | $ 11.21 | $ 23,881 | $ 134,543 | 2.19% | $ 234 | $ 134,543 | $ 23,881 |
| Oct-16 | 12,000 | 2,201 | 2,201 | 12,000 | $ 134,543 | $ 11.21 | $10.81 | $ 23,798 | $ 11.15 | $ 24,541 | $ 133,800 | 2.19% | $ 244 | $ 133,800 | $ 24,541 |

# Schedule 15

**FORM III**
**Schedule 1**

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 1: SUMMARY OF WINTER PERIOD BALANCE**
**May 2014 - April 2015**

| | AMOUNT | |
|---|---|---|
| Winter Period Beg. Balance | ($3,607,559) | SCHEDULE 2 |
| | | |
| Less: Reported Collections | ($34,417,439) | SCHEDULE 2 |
| Add: Cost of Firm Gas Allowable | $36,080,374 | SCHEDULE 4 |
| Add: Interest | ($56,962) | SCHEDULE 2 |
| | | |
| Winter Period Ending Balance | ($2,001,586) | |

**FORM III**
**Schedule 2**

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 2: ADJUSTMENTS TO REPORTED WINTER PERIOD ACCOUNTS**
**May 2014 - April 2015**
**Acct 191.20**

| | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WINTER PERIOD** | | | | | | | | | | | | | |
| Initial Winter Period Account Beginning Balance | $ (3,607,559) | $ (2,732,562) | $(2,487,010) | $(1,838,483) | $(2,023,724) | $(1,594,735) | $ (1,501,678) | $ (78,203) | $ (7,659) | $ (1,248,306) | $ (2,350,594) | $ (2,393,255) | $ (3,607,559) |
| Plus: Cost of Firm Gas (Schedule 4) | $ 340,408 | $ 253,952 | $ 654,620 | $ (180,160) | $ 433,834 | $ 97,239 | $ 5,310,299 | $ 6,409,158 | $ 7,916,177 | $ 7,772,389 | $ 5,101,141 | $ 1,971,316 | $ 36,080,374 |
| Less: Reported Collections (Schedule 3) | $ 543,163 | $ (1,341) | $ (244) | $ 142 | $ 48 | $ 5 | $ (3,884,687) | $ (6,338,498) | $ (9,155,126) | $ (8,869,810) | $ (5,137,386) | $ (1,573,705) | $ (34,417,439) |
| Winter Period Account Ending Balance | $ (2,723,988) | $ (2,479,951) | $ (1,832,634) | $ (2,018,501) | $ (1,589,841) | $ (1,497,491) | $ (76,066) | $ (7,543) | $ (1,246,608) | $ (2,345,727) | $ (2,386,840) | $ (1,995,643) | $ (1,944,624) |
| Month's Average Balance | $ (3,165,774) | $ (2,606,256) | $ (2,159,822) | $ (1,928,492) | $ (1,806,782) | $ (1,546,113) | $ (788,872) | $ (42,873) | $ (627,133) | $ (1,797,017) | $ (2,368,717) | $ (2,194,449) | |
| Interest Rate (Prime Rate) | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | |
| Interest Applied | $ (8,574) | $ (7,059) | $ (5,850) | $ (5,223) | $ (4,893) | $ (4,187) | $ (2,137) | $ (116) | $ (1,698) | $ (4,867) | $ (6,415) | $ (5,943) | $ (56,962) |
| Winter Period Account Ending Balance w/int | **$ (2,732,562)** | **$ (2,487,010)** | **$ (1,838,483)** | **$ (2,023,724)** | **$ (1,594,735)** | **$ (1,501,678)** | **$ (78,203)** | **$ (7,659)** | **$ (1,248,306)** | **$ (2,350,594)** | **$ (2,393,255)** | **$ (2,001,587)** | **$ (2,001,587)** |

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 3: REVENUE BACKUP TO REPORTED COLLECTIONS**
**May 2014 - April 2015**

**FORM III**
**Schedule 3**

| | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Accrued Revenue** | $ (1,601,623) | $ - | $ - | $ - | $ - | $ - | $ 2,308,302 | $ 566,459 | $ 1,366,759 | $ 85,975 | $ (1,681,681) | $ (2,048,622) | $ (1,004,431) |
| **Billed Revenue** | $ 1,058,460 | $ 1,341 | $ 244 | $ (142) | $ (48) | $ (5) | $ 1,576,386 | $ 5,772,039 | $ 7,788,367 | $ 8,783,834 | $ 6,819,067 | $ 3,622,327 | $ 35,421,870 |
| **Calendarized Revenue** | **$ (543,163)** | **$ 1,341** | **$ 244** | **$ (142)** | **$ (48)** | **$ (5)** | **$ 3,884,687** | **$ 6,338,498** | **$ 9,155,126** | **$ 8,869,810** | **$ 5,137,386** | **$ 1,573,705** | **$ 34,417,439** |

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 4: PURCHASED GAS COSTS ALLOCATED TO WINTER PERIOD**
**May 2014 - April 2015**

| Commodity Costs: | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | $ 78,154 | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,326,330 | $ 1,416,457 | $ 1,252,677 | $ 1,094,352 | $ 1,225,116 | **$ 6,393,086** |
| Distrigas | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 5,999 | $ - | $ - | $ - | **$ 5,999** |
| DTE | $ 22,857 | $ - | $ - | $ - | $ - | $ - | $ - | $ 63 | $ 1,984 | $ 1,207 | $ 1,160 | $ 542 | **$ 27,813** |
| JP Morgan | $ 234,409 | $ - | $ - | $ - | $ - | $ - | $ - | $ 328,039 | $ 356,160 | $ 315,532 | $ 278,773 | $ 201,166 | **$ 1,714,079** |
| Repsol | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,694,392 | $ 1,934,490 | $ 3,312,652 | $ 3,325,081 | $ 1,798,286 | **$ 12,064,900** |
| Shell | $ 288,372 | $ - | $ - | $ - | $ - | $ - | $ - | $ 168,318 | $ 222,746 | $ 202,032 | $ 219,977 | $ 199,425 | **$ 1,300,870** |
| South Jersey | $ 211,520 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ 211,520** |
| Southwestern | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 302,001 | $ 345,653 | $ 190,966 | $ 151,266 | $ 172,093 | **$ 1,161,980** |
| Tenaska | $ 339,400 | $ - | $ - | $ - | $ - | $ - | $ - | $ 84,187 | $ 126,244 | $ 84,267 | $ 86,130 | $ 101,064 | **$ 821,292** |
| Subtotal - Commodiity Supply | $ 1,174,712 | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,903,331 | $ 4,409,733 | $ 5,359,332 | $ 5,156,739 | $ 3,697,691 | **$ 23,701,538** |
| **Transportation Costs:** | | | | | | | | | | | | | |
| Granite | $ - | $ - | $ - | $ - | $ - | $ - | $ 341 | $ 526 | $ 881 | $ 950 | $ 532 | $ 289 | **$ 3,519** |
| Portland | $ 19 | $ - | $ - | $ - | $ - | $ - | $ - | $ 9,262 | $ 43,065 | $ 64,292 | $ 125,703 | $ 3,466 | **$ 245,808** |
| Tennessee | $ 10,610 | $ - | $ - | $ - | $ - | $ - | $ - | $ 11,911 | $ 12,469 | $ 11,860 | $ 10,642 | $ 11,919 | **$ 69,411** |
| Subtotal - Commodity Transportation | $ 10,629 | $ - | $ - | $ - | $ - | $ - | $ 341 | $ 21,699 | $ 56,415 | $ 77,102 | $ 136,878 | $ 15,674 | **$ 318,738** |
| Commodity Cost Estimates | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,924,225 | $ 4,451,024 | $ 5,371,183 | $ 5,295,846 | $ 3,716,834 | $ 727,128 | **$ 23,486,240** |
| Commodity Cost Reversals | $ (1,185,088) | $ - | $ - | $ - | $ - | $ - | $ - | $ (3,924,225) | $ (4,451,024) | $ (5,371,183) | $ (5,295,846) | $ (3,716,834) | **$ (23,944,200)** |
| Subtotal - Supply | $ 253 | $ - | $ - | $ - | $ - | $ - | $ 3,924,566 | $ 4,451,829 | $ 5,386,307 | $ 5,361,097 | $ 3,714,605 | $ 723,659 | **$ 23,562,316** |
| Withdrawal - Underground Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 99,782 | $ 470,787 | $ 2,081,832 | $ 1,994,750 | $ 954,667 | $ 180 | **$ 5,601,997** |
| Withdrawal - LNG Vaporization | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| ATV Reconciliation Charges | $ (15) | $ - | $ - | $ - | $ - | $ - | $ (22,386) | $ (71,299) | $ (117,086) | $ (164,824) | $ (58,438) | $ (6,862) | **$ (440,909)** |
| Off System Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (408,508) | $ (60,908) | $ (813,417) | $ (639,077) | $ (541,195) | **$ (2,463,105)** |
| Net OBA Adjustment | $ - | $ - | $ - | $ - | $ - | $ - | $ (2,429) | $ 5,185 | $ (8,297) | $ (9,051) | $ (4,893) | $ (18,369) | **$ (37,854)** |
| Company Managed | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (103,948) | $ (309,032) | $ (490,942) | $ (840,424) | $ (296,634) | **$ (2,040,981)** |
| LNG Boiloff | $ - | $ - | $ - | $ - | $ - | $ - | $ 8,151 | $ 23,138 | $ 22,263 | $ 125,528 | $ 18,814 | $ 14,927 | **$ 212,821** |
| Transportation Charges | $ 115,416 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 5,448 | $ (32,552) | $ 134,034 | $ 514,748 | **$ 737,093** |
| Hedging Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Propane | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Inventory Finance Charage | $ 306 | $ 353 | $ 407 | $ 455 | $ 477 | $ 537 | $ 558 | $ 545 | $ 426 | $ 244 | $ 152 | $ 109 | **$ 4,568** |
| Prior Period Adjustments | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Subtotal - Other Commodity | $ 115,707 | $ 353 | $ 407 | $ 455 | $ 477 | $ 537 | $ 83,678 | $ (84,100) | $ 1,614,644 | $ 609,735 | $ (435,165) | $ (333,096) | **$ 1,573,630** |
| Off System Sales Estimates | $ - | $ - | $ - | $ - | $ - | $ - | $ (551,993) | $ (366,915) | $ (1,304,359) | $ (1,479,501) | $ (837,829) | $ - | **$ (4,540,597)** |
| Off System Sales Reversals | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 551,993 | $ 366,915 | $ 1,304,359 | $ 1,479,501 | $ 837,829 | **$ 4,540,597** |
| **Subtotal Estimates/Reversals** | $ - | $ - | $ - | $ - | $ - | $ - | $ (551,993) | $ 185,078 | $ (937,444) | $ (175,142) | $ 641,672 | $ 837,829 | **$ -** |
| **Total Commodity Costs** | **$ 115,960** | **$ 353** | **$ 407** | **$ 455** | **$ 477** | **$ 537** | **$ 3,456,250** | **$ 4,552,807** | **$ 6,063,507** | **$ 5,795,690** | **$ 3,921,112** | **$ 1,228,392** | **$ 25,135,946** |

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 4: PURCHASED GAS COSTS ALLOCATED TO WINTER PERIOD**
**May 2014 - April 2015**



| Demand Costs | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pipeline Reservation** | | | | | | | | | | | | | |
| Alberta Northeast | $ 7,545 | $ 9,630 | $ 10,730 | $ 10,475 | $ 14,965 | $ 10,688 | $ 15,975 | $ 8,182 | $ 7,432 | $ 7,860 | $ 5,797 | $ 6,702 | **$ 115,981** |
| Algonquin | $ 16,033 | $ 16,047 | $ 16,047 | $ 16,046 | $ 16,047 | $ 16,047 | $ 16,047 | $ 16,193 | $ 16,183 | $ 16,186 | $ 16,121 | $ 16,119 | **$ 193,116** |
| DTE Energy | $ 307,046 | $ 347,828 | $ 347,795 | $ 305,206 | $ 300,934 | $ 297,794 | $ 296,063 | $ 290,624 | $ 272,247 | $ 435,589 | $ 437,984 | $ 452,022 | **$ 4,091,132** |
| Emera | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Granite State | $ 166,124 | $ 166,124 | $ 166,124 | $ 182,502 | $ 182,502 | $ 182,502 | $ 184,164 | $ 184,164 | $ 184,164 | $ 184,164 | $ 184,164 | $ 184,164 | **$ 2,150,860** |
| Iroquois | $ 20,472 | $ 20,472 | $ 20,472 | $ 20,472 | $ 20,472 | $ 20,472 | $ 20,472 | $ 20,658 | $ 20,658 | $ 20,658 | $ 20,658 | $ 20,658 | **$ 246,597** |
| Portland | $ 20,913 | $ 20,913 | $ 20,913 | $ 20,913 | $ 20,913 | $ 20,913 | $ 20,913 | $ 1,224,007 | $ 1,224,007 | $ 1,224,007 | $ 790,271 | $ 790,271 | **$ 5,398,957** |
| Tennessee | $ 178,924 | $ 178,924 | $ 178,924 | $ 178,924 | $ 178,924 | $ 178,924 | $ 178,128 | $ 181,026 | $ 181,829 | $ 181,026 | $ 181,026 | $ 181,026 | **$ 2,157,602** |
| Texas Eastern | $ 2,506 | $ 2,506 | $ 2,506 | $ 2,506 | $ 2,502 | $ 2,502 | $ 2,502 | $ 2,525 | $ 2,524 | $ 2,524 | $ 2,582 | $ 2,582 | **$ 30,267** |
| Union/ Repsol | $ 32,536 | $ 32,829 | $ 33,334 | $ 33,407 | $ 31,399 | $ 32,578 | $ 31,996 | $ 31,963 | $ 31,390 | $ 45,215 | $ 43,811 | $ 43,395 | **$ 423,853** |
| Vector | $ 85,278 | $ 85,280 | $ 85,296 | $ 85,274 | $ 85,255 | $ 85,225 | $ 85,225 | $ 123,144 | $ 123,099 | $ 123,047 | $ 123,019 | $ 123,063 | **$ 1,212,204** |
| Total Pipeline Reservation | $ 837,378 | $ 880,553 | $ 882,141 | $ 855,726 | $ 853,913 | $ 847,646 | $ 851,485 | $ 2,082,484 | $ 2,063,534 | $ 2,240,275 | $ 1,805,432 | $ 1,820,002 | **$ 16,020,568** |
| **Product Demand** | | | | | | | | | | | | | |
| Alberta Northeast | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| BG | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Distrigas | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 52,884 | $ 48,623 | $ 48,623 | $ 48,623 | $ 48,623 | **$ 276,932** |
| DTE Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Emera Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Repsol | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 236,682 | $ 244,571 | $ 244,571 | $ 220,903 | $ 244,571 | **$ 1,191,297** |
| Shell | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,027 | $ 25,027 | $ 25,027 | $ 25,027 | $ 25,027 | **$ 125,134** |
| Total Product Demand | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 4,222 | $ 314,592 | $ 318,221 | $ 318,221 | $ 294,553 | $ 318,221 | **$ 1,593,363** |
| **Storage Pipeline Transportation and Demand Reservation** | | | | | | | | | | | | | |
| Tennessee | $ 5,672 | $ 5,672 | $ 5,672 | $ 5,672 | $ 5,672 | $ 5,672 | $ 5,672 | $ 5,723 | $ 5,723 | $ 5,723 | $ 5,723 | $ 5,723 | **$ 68,319** |
| Texas Eastern | $ 81 | $ 81 | $ 81 | $ 81 | $ 81 | $ 78 | $ 78 | $ 79 | $ 80 | $ 79 | $ 80 | $ 81 | **$ 960** |
| Wash 10 | $ 113,770 | $ 113,770 | $ 113,770 | $ 113,770 | $ 113,770 | $ 113,770 | $ 113,770 | $ 114,805 | $ 114,805 | $ 114,805 | $ 114,805 | $ 114,805 | **$ 1,370,414** |
| Company Managed | $ (129,346) | $ (60,696) | $ (61,811) | $ (60,399) | $ (60,723) | $ (57,419) | $ (61,335) | $ (320,132) | $ (312,487) | $ (296,112) | $ (324,530) | $ (212,234) | **$ (1,957,227)** |
| Total Storage and Demand Reservation | $ (9,824) | $ 58,826 | $ 57,711 | $ 59,123 | $ 58,799 | $ 62,100 | $ 58,184 | $ (199,524) | $ (191,879) | $ (175,504) | $ (203,921) | $ (91,625) | **$ (517,534)** |
| Demand Cost Estimates | $ 731,191 | $ 736,222 | $ 737,842 | $ 737,518 | $ 740,614 | $ 718,897 | $ 2,012,866 | $ 2,024,349 | $ 2,040,724 | $ 1,988,010 | $ 1,625,482 | $ 612,556 | **$ 14,706,271** |
| Demand Cost Reversals | $ (727,752) | $ (731,191) | $ (736,222) | $ (737,842) | $ (737,518) | $ (740,614) | $ (718,897) | $ (2,012,866) | $ (2,024,349) | $ (2,040,724) | $ (1,988,010) | $ (1,625,482) | **$ (14,821,467)** |
| Subtotal | $ 3,439 | $ 5,031 | $ 1,620 | $ (324) | $ 3,096 | $ (21,717) | $ 1,293,969 | $ 11,483 | $ 16,375 | $ (52,714) | $ (362,528) | $ (1,012,926) | **$ (115,196)** |
| Total Direct Demand Costs | $ 835,215 | $ 948,632 | $ 945,693 | $ 918,747 | $ 920,029 | $ 892,252 | $ 2,207,860 | $ 2,209,036 | $ 2,206,251 | $ 2,330,278 | $ 1,533,536 | $ 1,033,672 | **$ 16,981,201** |
| Amortization of PNGTS Rate Case Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Capacity Release | $ (481,974) | $ (482,489) | $ (537,059) | $ (537,750) | $ (537,703) | $ (482,775) | $ (488,301) | $ (489,448) | $ (489,341) | $ (493,365) | $ (492,430) | $ (494,703) | **$ (6,007,336)** |
| Capacity Mitigation | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,764) | $ (3,393) | $ (2,732) | $ - | $ - | $ - | **$ (32,092)** |
| Production and Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 69,469 | $ 69,469 | $ 69,469 | $ 69,469 | $ 69,469 | $ 69,469 | **$ 416,811** |
| Miscellaneous Overhead | $ - | $ - | $ - | $ - | $ - | $ - | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | $ 70,110 | **$ 420,658** |
| Total Indirect Demand Costs | $ (485,675) | $ (486,189) | $ (540,759) | $ (541,451) | $ (541,403) | $ (486,476) | $ (352,486) | $ (353,263) | $ (352,495) | $ (353,786) | $ (352,852) | $ (355,124) | **$ (5,201,959)** |
| Demand Cost Estimates - Capacity Release | $ (479,439) | $ (534,008) | $ (130,455) | $ (534,091) | $ (325,086) | $ (479,886) | $ (481,211) | $ (480,633) | $ (481,719) | $ (481,511) | $ (482,166) | $ (417,789) | **$ (5,307,994)** |
| Demand Cost Reversals - Capacity Release | $ 508,621 | $ 479,439 | $ 534,008 | $ 130,455 | $ 534,091 | $ 325,086 | $ 479,886 | $ 481,211 | $ 480,633 | $ 481,719 | $ 481,511 | $ 482,166 | **$ 5,398,826** |
| Subtotal | $ 29,182 | $ (54,569) | $ 403,553 | $ (403,636) | $ 209,005 | $ (154,800) | $ (1,325) | $ 578 | $ (1,086) | $ 208 | $ (655) | $ 64,377 | **$ 90,832** |
| **Total Demand Costs** | **$ 378,722** | **$ 407,874** | **$ 808,487** | **$ (26,340)** | **$ 587,631** | **$ 250,976** | **$ 1,854,049** | **$ 1,856,351** | **$ 1,852,670** | **$ 1,976,699** | **$ 1,180,029** | **$ 742,924** | $ 11,870,074 |
| **Demand Costs Transferred to Summer** | $ (154,274) | $ (154,274) | $ (154,274) | $ (154,274) | $ (154,274) | $ (154,274) | $ - | $ - | $ - | $ - | $ - | $ - | **$ (925,646)** |
| **Net Demand Costs For Winter Period** | **$ 224,448** | **$ 253,600** | **$ 654,213** | **$ (180,614)** | **$ 433,357** | **$ 96,702** | **$ 1,854,049** | **$ 1,856,351** | **$ 1,852,670** | **$ 1,976,699** | **$ 1,180,029** | **$ 742,924** | **$ 10,944,428** |
| **Total Gas Costs** | **$ 340,408** | **$ 253,952** | **$ 654,620** | **$ (180,160)** | **$ 433,834** | **$ 97,239** | **$ 5,310,299** | **$ 6,409,158** | **$ 7,916,177** | **$ 7,772,389** | **$ 5,101,141** | **$ 1,971,316** | **$ 36,080,374** |

**Redacted**

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - UNITS**
**May 2014 - April 2015**

| **Commodity Volumes:** | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | | | | | | | | | | | | | |
| DTE | | | | | | | | | | | | | |
| JP Morgan | | | | | | | | | | | | | |
| Repsol | | | | | | | | | | | | | |
| Shell | | | | | | | | | | | | | |
| South Jersey | | | | | | | | | | | | | |
| Southwestern | | | | | | | | | | | | | |
| Tenaska | | | | | | | | | | | | | |
| Subtotal - Commodity Supply | | | | | | | | | | | | | |
| **Transportation Volumes** | | | | | | | | | | | | | |
| Granite | | | | | | | | | | | | | |
| Portland | | | | | | | | | | | | | |
| Tennessee | | | | | | | | | | | | | |
| Subtotal - Commodity Transportation | | | | | | | | | | | | | |
| Commodity Volume Estimates | | | | | | | | | | | | | |
| Commodity Volume Reversals | | | | | | | | | | | | | |
| Subtotal - Supply | | | | | | | | | | | | | |
| Withdrawal - Underground Storage | | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | | | | | | | | | | | | | |
| ATV Reconciliation | | | | | | | | | | | | | |
| Off System Sales | | | | | | | | | | | | | |
| Net OBA Adjustment | | | | | | | | | | | | | |
| Company Managed | | | | | | | | | | | | | |
| LNG Boiloff | | | | | | | | | | | | | |
| Transportation Charges | | | | | | | | | | | | | |
| Hedging Costs | | | | | | | | | | | | | |
| Propane | | | | | | | | | | | | | |
| Prior Period Adjustment | | | | | | | | | | | | | |
| Subtotal - Other Commodity | | | | | | | | | | | | | |
| Off System & Company Managed Estimates | | | | | | | | | | | | | |
| Off System & Company Managed Reversals | | | | | | | | | | | | | |
| **Total Commodity Volumes** | | | | | | | | | | | | | |

Redacted



**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN COST PER UNIT**
**May 2014 - April 2015**

| **Commodity Costs:** | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | | | | | | | | | | | | | |
| DTE | | | | | | | | | | | | | |
| JP Morgan | | | | | | | | | | | | | |
| Repsol | | | | | | | | | | | | | |
| Shell | | | | | | | | | | | | | |
| South Jersey | | | | | | | | | | | | | |
| Southwestern | | | | | | | | | | | | | |
| Tenaska | | | | | | | | | | | | | |
| Subtotal - Commodity Supply | | | | | | | | | | | | | |
| **Transportation Costs:** | | | | | | | | | | | | | |
| Granite | | | | | | | | | | | | | |
| Portland | | | | | | | | | | | | | |
| Tennessee | | | | | | | | | | | | | |
| Subtotal - Commodity Transportation | | | | | | | | | | | | | |
| Commodity Cost Estimates | | | | | | | | | | | | | |
| Commodity Cost Reversals | | | | | | | | | | | | | |
| Subtotal - Supply | | | | | | | | | | | | | |
| Withdrawal - Underground Storage | | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | | | | | | | | | | | | | |
| ATV Reconciliation Charges | | | | | | | | | | | | | |
| Off System Sales | | | | | | | | | | | | | |
| Net OBA Adjustment | | | | | | | | | | | | | |
| Company Managed | | | | | | | | | | | | | |
| LNG Boiloff | | | | | | | | | | | | | |
| Transportation Charges | | | | | | | | | | | | | |
| Hedging Costs | | | | | | | | | | | | | |
| Propane | | | | | | | | | | | | | |
| Prior Period Adjustments | | | | | | | | | | | | | |
| Subtotal - Other Commodity | | | | | | | | | | | | | |
| Off System Sales Estimates | | | | | | | | | | | | | |
| Off System Sales Reversals | | | | | | | | | | | | | |
| **Total Commodity Costs** | | | | | | | | | | | | | |

**NORTHERN UTILITIES, INC. - MAINE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN DOLLARS**
**May 2014 - April 2015**

| **Commodity Costs:** | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | $ 81,866 | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,472,425 | $ 1,625,108 | $ 1,534,766 | $ 1,355,508 | $ 1,493,739 | **$ 7,563,412** |
| Distrigas | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 6,882 | $ - | $ - | $ - | **$ 6,882** |
| DTE | $ 23,943 | $ - | $ - | $ - | $ - | $ - | $ - | $ 70 | $ 2,277 | $ 1,478 | $ 1,436 | $ 660 | **$ 29,865** |
| JP Morgan | $ 245,544 | $ - | $ - | $ - | $ - | $ - | $ - | $ 364,173 | $ 408,624 | $ 386,586 | $ 345,299 | $ 245,275 | **$ 1,995,500** |
| Repsol | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,881,029 | $ 2,219,450 | $ 4,058,625 | $ 4,118,575 | $ 2,192,583 | **$ 14,470,262** |
| Shell | $ 302,070 | $ - | $ - | $ - | $ - | $ - | $ - | $ 186,858 | $ 255,558 | $ 247,527 | $ 272,472 | $ 243,151 | **$ 1,507,637** |
| South Jersey | $ 221,567 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ 221,567** |
| Southwestern | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 335,267 | $ 396,569 | $ 233,970 | $ 187,364 | $ 209,827 | **$ 1,362,997** |
| Tenaska | $ 355,522 | $ - | $ - | $ - | $ - | $ - | $ - | $ 93,460 | $ 144,840 | $ 103,243 | $ 106,684 | $ 123,223 | **$ 926,973** |
| Subtotal - Commodity Supply | $ 1,230,513 | $ - | $ - | $ - | $ - | $ - | $ - | $ 4,333,282 | $ 5,059,309 | $ 6,566,195 | $ 6,387,338 | $ 4,508,459 | **$ 28,085,096** |
| **Transportation Costs:** | | | | | | | | | | | | | |
| Granite | $ - | $ - | $ - | $ - | $ - | $ - | $ 378 | $ 604 | $ 1,079 | $ 1,177 | $ 649 | $ 409 | **$ 4,296** |
| Portland | $ 20 | $ - | $ - | $ - | $ - | $ - | $ - | $ 10,282 | $ 49,409 | $ 78,770 | $ 155,701 | $ 4,226 | **$ 298,409** |
| Tennessee | $ 11,114 | $ - | $ - | $ - | $ - | $ - | $ - | $ 13,223 | $ 14,306 | $ 14,530 | $ 13,182 | $ 14,533 | **$ 80,888** |
| Subtotal - Commodity Transportation | $ 11,134 | $ - | $ - | $ - | $ - | $ - | $ 378 | $ 24,109 | $ 64,794 | $ 94,478 | $ 169,532 | $ 19,168 | **$ 383,593** |
| Commodity Cost Estimates | $ - | $ - | $ - | $ - | $ - | $ - | $ 4,356,478 | $ 5,106,682 | $ 6,580,715 | $ 6,559,641 | $ 4,531,799 | $ 1,030,919 | **$ 28,166,234** |
| Commodity Cost Reversals | $ (1,241,382) | $ - | $ - | $ - | $ - | $ - | $ - | $ (4,356,478) | $ (5,106,682) | $ (6,580,715) | $ (6,559,641) | $ (4,531,799) | **$ (28,376,697)** |
| Subtotal - Supply | $ 266 | $ - | $ - | $ - | $ - | $ - | $ 4,356,856 | $ 5,107,595 | $ 6,598,136 | $ 6,639,599 | $ 4,529,028 | $ 1,026,747 | **$ 28,258,226** |
| Withdrawal - Underground Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 110,773 | $ 540,136 | $ 2,550,629 | $ 2,470,770 | $ 1,163,995 | $ 219 | **$ 6,836,523** |
| Withdrawal - LNG Vaporization | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| ATV Reconciliation Charges | $ - | $ - | $ - | $ - | $ - | $ - | $ (24,851) | $ (81,802) | $ (143,453) | $ (204,158) | $ (71,251) | $ (9,728) | **$ (535,243)** |
| Off System Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (453,505) | $ (69,881) | $ (996,590) | $ (791,585) | $ (659,859) | **$ (2,971,420)** |
| Net OBA Adjustment | $ - | $ - | $ - | $ - | $ - | $ - | $ (2,696) | $ 5,949 | $ (10,166) | $ (11,211) | $ (5,966) | $ (26,043) | **$ (50,134)** |
| Company Managed | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (69,651) | $ (281,509) | $ (1,060,022) | $ (1,448,803) | $ (737,474) | **$ (3,597,459)** |
| LNG Boiloff | $ - | $ - | $ - | $ - | $ - | $ - | $ 9,049 | $ 26,546 | $ 27,276 | $ 155,484 | $ 22,939 | $ 21,164 | **$ 262,459** |
| Transportation Charges | $ 120,898 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 6,250 | $ (39,882) | $ 177,357 | $ 648,037 | **$ 912,660** |
| Hedging Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Propane | $ - | $ - | $ - | $ - | $ - | $ - | $ 376 | $ 513 | $ 1,069 | $ 1,486 | $ 1,800 | $ 992 | **$ 6,237** |
| Inventory Finance Charage | $ 325 | $ 383 | $ 463 | $ 501 | $ 536 | $ 619 | $ 620 | $ 625 | $ 522 | $ 302 | $ 185 | $ 154 | **$ 5,235** |
| Prior Period Adjustments | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Subtotal - Other Commodity | $ 121,223 | $ 383 | $ 463 | $ 501 | $ 536 | $ 619 | $ 93,271 | $ (31,188) | $ 2,080,738 | $ 316,179 | $ (951,329) | $ (762,538) | **$ 868,858** |
| **Off System Sales Estimates** | $ - | $ - | $ - | $ - | $ - | $ - | $ (567,048) | $ (347,919) | $ (2,056,612) | $ (2,240,388) | $ (1,397,333) | $ - | **$ (6,609,300)** |
| **Off System Sales Reversals** | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 567,048 | $ 347,919 | $ 2,056,612 | $ 2,240,388 | $ 1,397,333 | **$ 6,609,300** |
| **Subtotal Estimates/Reversals** | $ - | $ - | $ - | $ - | $ - | $ - | $ (567,048) | $ 219,129 | $ (1,708,693) | $ (183,776) | $ 843,055 | $ 1,397,333 | **$ -** |
| **Total Commodity Costs** | $ 121,489 | $ 383 | $ 463 | $ 501 | $ 536 | $ 619 | $ 3,883,079 | $ 5,295,536 | $ 6,970,180 | $ 6,772,002 | $ 4,420,753 | $ 1,661,542 | **$ 29,127,084** |

**NORTHERN UTILITIES, INC. - MAINE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN DOLLARS**
**May 2014 - April 2015**

| Demand Costs | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pipeline Reservation** | | | | | | | | | | | | | |
| Alberta Northeast | $ 8,427 | $ 10,755 | $ 11,984 | $ 11,699 | $ 16,714 | $ 11,937 | $ 17,842 | $ 8,982 | $ 8,159 | $ 8,628 | $ 6,363 | $ 7,357 | $ 128,846 |
| Algonquin | $ 17,906 | $ 17,922 | $ 17,922 | $ 17,921 | $ 17,922 | $ 17,922 | $ 17,922 | $ 17,776 | $ 17,765 | $ 17,768 | $ 17,697 | $ 17,695 | $ 214,138 |
| DTE Energy | $ 342,924 | $ 311,436 | $ 311,407 | $ 340,870 | $ 336,098 | $ 332,592 | $ 330,658 | $ 319,034 | $ 298,861 | $ 478,170 | $ 480,799 | $ 496,209 | $ 4,379,058 |
| Emera | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Granite State | $ 185,536 | $ 185,536 | $ 185,536 | $ 203,828 | $ 203,828 | $ 203,828 | $ 202,166 | $ 202,166 | $ 202,166 | $ 202,166 | $ 202,166 | $ 202,166 | $ 2,381,090 |
| Iroquois | $ 22,864 | $ 22,864 | $ 22,864 | $ 22,864 | $ 22,864 | $ 22,864 | $ 22,864 | $ 22,678 | $ 22,678 | $ 22,678 | $ 22,678 | $ 22,678 | $ 273,439 |
| Portland | $ 23,357 | $ 23,357 | $ 23,357 | $ 23,357 | $ 23,357 | $ 23,357 | $ 23,357 | $ 1,343,661 | $ 1,343,661 | $ 1,343,661 | $ 867,525 | $ 867,525 | $ 5,929,530 |
| Tennessee | $ 199,831 | $ 199,831 | $ 199,831 | $ 199,831 | $ 199,831 | $ 199,831 | $ 198,942 | $ 198,722 | $ 199,603 | $ 198,722 | $ 198,722 | $ 198,722 | $ 2,392,420 |
| Texas Eastern | $ 2,799 | $ 2,799 | $ 2,799 | $ 2,799 | $ 2,794 | $ 2,794 | $ 2,794 | $ 2,771 | $ 2,771 | $ 2,771 | $ 2,834 | $ 2,834 | $ 33,560 |
| Union/ Repsol | $ - | $ - | $ - | $ - | $ (1,589) | $ - | $ - | $ - | $ - | $ 14 | $ - | $ - | $ (1,575) |
| Vector | $ 95,243 | $ 95,245 | $ 95,263 | $ 95,238 | $ 95,217 | $ 95,184 | $ 95,183 | $ 135,182 | $ 135,132 | $ 135,075 | $ 135,045 | $ 135,093 | $ 1,342,099 |
| Total Pipeline Reservation | $898,887 | $869,746 | $870,963 | $918,407 | $917,036 | $910,309 | $911,729 | $2,250,971 | $2,230,796 | $2,409,653 | $1,933,829 | $1,950,279 | $17,072,606 |
| **Product Demand** | | | | | | | | | | | | | |
| Alberta Northeast | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| BP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Distrigas | $ 4,715 | $ 4,715 | $ 4,715 | $ 4,715 | $ 4,715 | $ 4,715 | $ 4,715 | $ 58,054 | $ 53,377 | $ 53,377 | $ 53,377 | $ 53,377 | $ 304,568 |
| DTE Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Emera Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Repsol | $ 36,338 | $ 36,665 | $ 37,229 | $ 37,310 | $ 36,666 | $ 36,385 | $ 35,735 | $ 294,906 | $ 302,938 | $ 318,100 | $ 290,591 | $ 316,116 | $ 1,778,979 |
| Shell | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 27,473 | $ 27,473 | $ 27,473 | $ 27,473 | $ 27,473 | $ 137,366 |
| Total Product Demand | $ 41,053 | $ 41,380 | $ 41,944 | $ 42,026 | $ 41,381 | $ 41,100 | $ 40,451 | $ 380,432 | $ 383,788 | $ 398,950 | $ 371,441 | $ 396,966 | $ 2,220,913 |
| **Storage Pipeline Transportation and Demand Reservation** | | | | | | | | | | | | | |
| Tennessee | $ 6,334 | $ 6,334 | $ 6,334 | $ 6,334 | $ 6,334 | $ 6,334 | $ 6,334 | $ 6,283 | $ 6,283 | $ 6,283 | $ 6,283 | $ 6,283 | $ 75,756 |
| Texas Eastern | $ 91 | $ 91 | $ 90 | $ 90 | $ 90 | $ 87 | $ 87 | $ 87 | $ 88 | $ 87 | $ 88 | $ 89 | $ 1,064 |
| Wash 10 | $ 127,064 | $ 127,064 | $ 127,064 | $ 127,064 | $ 127,064 | $ 127,064 | $ 127,064 | $ 126,028 | $ 126,028 | $ 126,028 | $ 126,028 | $ 126,028 | $ 1,519,586 |
| Company Managed | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (787,586) | $ (763,115) | $ (729,290) | $ (737,882) | $ (732,934) | $ (3,750,806) |
| Total Storage and Demand Reservation | $ 133,489 | $ 133,489 | $ 133,488 | $ 133,488 | $ 133,488 | $ 133,485 | $ 133,486 | $ (655,187) | $ (630,716) | $ (596,892) | $ (605,483) | $ (600,534) | $ (2,154,400) |
| Demand Cost Estimates | $ 884,419 | $ 891,283 | $ 891,515 | $ 891,515 | $ 891,283 | $ 869,274 | $ 1,773,474 | $ 1,802,159 | $ 1,835,984 | $ 1,800,721 | $ 1,356,204 | $ 846,218 | $ 14,734,049 |
| Demand Cost Reversals | $ (957,249) | $ (884,419) | $ (891,283) | $ (891,515) | $ (891,515) | $ (891,283) | $ (869,274) | $ (1,773,474) | $ (1,802,159) | $ (1,835,984) | $ (1,800,721) | $ (1,356,204) | $ (14,845,080) |
| Subtotal Estimates/Reversals | $ (72,830) | $ 6,864 | $ 232 | $ - | $ (232) | $ (22,009) | $ 904,200 | $ 28,685 | $ 33,825 | $ (35,263) | $ (444,517) | $ (509,986) | $ (111,031) |
| Totall Direct Demand Costs | $ 1,000,599 | $ 1,051,479 | $ 1,046,627 | $ 1,093,921 | $ 1,091,673 | $ 1,062,885 | $ 1,989,866 | $ 2,004,901 | $ 2,017,693 | $ 2,176,448 | $ 1,255,270 | $ 1,236,725 | $ 17,028,088 |
| Amortization of PNGTS Rate Case Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Capacity Release | $ (501,934) | $ (502,094) | $ (562,373) | $ (562,668) | $ (562,640) | $ (501,246) | $ (505,857) | $ (504,726) | $ (507,268) | $ (509,290) | $ (508,703) | $ (519,073) | $ (6,247,872) |
| Capacity Mitigation | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Production and Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 122,897 | $ 122,897 | $ 122,897 | $ 122,897 | $ 122,897 | $ 122,897 | $ 737,382 |
| Miscellaneous Overhead | $ - | $ - | $ - | $ - | $ - | $ - | $ 61,951 | $ 61,951 | $ 61,951 | $ 61,951 | $ 61,951 | $ 61,951 | $ 371,708 |
| Total Indirect Demand Costs | $ (501,934) | $ (502,094) | $ (562,373) | $ (562,668) | $ (562,640) | $ (501,246) | $ (321,009) | $ (319,878) | $ (322,420) | $ (324,441) | $ (323,854) | $ (334,224) | $ (5,138,782) |
| Demand Cost Estimates - Capacity Release | $ (495,193) | $ (556,139) | $ (105,430) | $ (556,231) | $ (323,155) | $ (495,193) | $ (491,066) | $ (491,157) | $ (491,157) | $ (490,884) | $ (491,157) | $ (419,851) | $ (5,406,613) |
| Demand Cost Reversals - Capacity Release | $ 528,076 | $ 495,193 | $ 556,139 | $ 105,430 | $ 556,231 | $ 323,155 | $ 495,193 | $ 491,066 | $ 491,157 | $ 491,157 | $ 490,884 | $ 491,157 | $ 5,514,838 |
| Subtotal | $ 32,883 | $ (60,946) | $ 450,709 | $ (450,801) | $ 233,076 | $ (172,038) | $ 4,127 | $ (91) | $ - | $ 273 | $ (273) | $ 71,306 | $ 108,225 |
| **Total Demand Costs** | $ 531,548 | $ 488,439 | $ 934,962 | $ 80,452 | $ 762,109 | $ 389,601 | $ 1,672,984 | $ 1,684,933 | $ 1,695,273 | $ 1,852,279 | $ 931,143 | $ 973,807 | $ 11,997,531 |
| **Demand Costs Transferred to Summer** | $ (191,995) | $ (191,995) | $ (191,995) | $ (191,995) | $ (191,995) | $ (191,995) | $ - | $ - | $ - | $ - | $ - | $ - | $ (1,151,970) |
| **Net Demand Costs For Winter Period** | **$ 339,553** | **$ 296,444** | **$ 742,968** | **$ (111,543)** | **$ 570,114** | **$ 197,606** | **$ 1,672,984** | **$ 1,684,933** | **$ 1,695,273** | **$ 1,852,279** | **$ 931,143** | **$ 973,807** | **$ 10,845,561** |
| **Total Gas Costs** | **$ 461,042** | **$ 296,827** | **$ 743,431** | **$ (111,042)** | **$ 570,650** | **$ 198,225** | **$ 5,556,063** | **$ 6,980,469** | **$ 8,665,454** | **$ 8,624,281** | **$ 5,351,896** | **$ 2,635,349** | **$ 39,972,645** |

Redacted

**NORTHERN UTILITIES, INC. - MAINE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - UNITS**
**May 2014 - April 2015**

| **Commodity Volumes:** | **May-14** | **Jun-14** | **Jul-14** | **Aug-14** | **Sep-14** | **Oct-14** | **Nov-14** | **Dec-14** | **Jan-15** | **Feb-15** | **Mar-15** | **Apr-15** | **Total Winter** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | | | | | | | | | | | | | |
| DTE | | | | | | | | | | | | | |
| JP Morgan | | | | | | | | | | | | | |
| Repsol | | | | | | | | | | | | | |
| Shell | | | | | | | | | | | | | |
| South Jersey | | | | | | | | | | | | | |
| Southwestern | | | | | | | | | | | | | |
| Tenaska | | | | | | | | | | | | | |
| Subtotal - Commodity Costs | | | | | | | | | | | | | |
| **Transportation Volumes** | | | | | | | | | | | | | |
| Granite | | | | | | | | | | | | | |
| Portland | | | | | | | | | | | | | |
| Tennessee | | | | | | | | | | | | | |
| Subtotal- Commodity Transportation | | | | | | | | | | | | | |
| Commodity Volume Estimates | | | | | | | | | | | | | |
| Commodity Volume Reversals | | | | | | | | | | | | | |
| Subtotal - Supply | | | | | | | | | | | | | |
| Withdrawal - Underground Storage | | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | | | | | | | | | | | | | |
| ATV Reconciliation | | | | | | | | | | | | | |
| Off System Sales | | | | | | | | | | | | | |
| Net OBA Adjustment | | | | | | | | | | | | | |
| Company Managed | | | | | | | | | | | | | |
| LNG Boiloff | | | | | | | | | | | | | |
| Transportation Charges | | | | | | | | | | | | | |
| Hedging Costs | | | | | | | | | | | | | |
| Propane | | | | | | | | | | | | | |
| Prior Period Adjustment | | | | | | | | | | | | | |
| Subtotal - Other Commodity | | | | | | | | | | | | | |
| Off System & Company Managed Estimates | | | | | | | | | | | | | |
| Off System & Company Managed Reversals | | | | | | | | | | | | | |
| **Total Commodity Volumes** | | | | | | | | | | | | | |

Redacted

**NORTHERN UTILITIES, INC. - MAINE DIVISION**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN COST PER UNIT**
**May 2014 - April 2015**

| **Commodity Costs:** | **May-14** | **Jun-14** | **Jul-14** | **Aug-14** | **Sep-14** | **Oct-14** | **Nov-14** | **Dec-14** | **Jan-15** | **Feb-15** | **Mar-15** | **Apr-15** | **Total Winter** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | [redacted] | | | | | | | | | | | | |
| DTE | [redacted] | | | | | | | | | | | | |
| JP Morgan | [redacted] | | | | | | | | | | | | |
| Repsol | [redacted] | | | | | | | | | | | | |
| Shell | [redacted] | | | | | | | | | | | | |
| South Jersey | [redacted] | | | | | | | | | | | | |
| Southwestern | [redacted] | | | | | | | | | | | | |
| Tenaska | [redacted] | | | | | | | | | | | | |
| Subtotal - Commodity Supply | [redacted] | | | | | | | | | | | | |
| Transportation Costs: | | | | | | | | | | | | | |
| Granite | [redacted] | | | | | | | | | | | | |
| Portland | [redacted] | | | | | | | | | | | | |
| Tennessee | [redacted] | | | | | | | | | | | | |
| Subtotal - Commoditty Transportation | [redacted] | | | | | | | | | | | | |
| Commodity Cost Estimates | [redacted] | | | | | | | | | | | | |
| Commodity Cost Reversals | [redacted] | | | | | | | | | | | | |
| Subtotal - Supply | [redacted] | | | | | | | | | | | | |
| Withdrawal - Underground Storage | [redacted] | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | [redacted] | | | | | | | | | | | | |
| ATV Reconciliation Charges | [redacted] | | | | | | | | | | | | |
| Off System Sales | [redacted] | | | | | | | | | | | | |
| Net OBA Adjustment | [redacted] | | | | | | | | | | | | |
| Company Managed | [redacted] | | | | | | | | | | | | |
| LNG Boiloff | [redacted] | | | | | | | | | | | | |
| Transportation Charges | [redacted] | | | | | | | | | | | | |
| Hedging Costs | [redacted] | | | | | | | | | | | | |
| Propane | [redacted] | | | | | | | | | | | | |
| Inventory Finance Charge | [redacted] | | | | | | | | | | | | |
| Prior Period Adjustments | [redacted] | | | | | | | | | | | | |
| Subtotal - Other Commodity | [redacted] | | | | | | | | | | | | |
| Off System Sales Estimates | [redacted] | | | | | | | | | | | | |
| Off System Sales Reversals | [redacted] | | | | | | | | | | | | |
| **Total Commodity Costs** | [redacted] | | | | | | | | | | | | |

**NORTHERN UTILITIES, INC. - BOTH DIVISIONs**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 4: PURCHASED GAS COSTS ALLOCATED TO WINTER PERIOD**
**May 2014 - April 2015**

| Commodity Costs: | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | $ 160,020 | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,798,755 | $ 3,041,565 | $ 2,787,443 | $ 2,449,860 | $ 2,718,855 | $ 13,956,498 |
| Distrigas | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,881 | $ - | $ - | $ - | $ 12,881 |
| DTE | $ 46,800 | $ - | $ - | $ - | $ - | $ - | $ - | $ 133 | $ 4,261 | $ 2,685 | $ 2,596 | $ 1,202 | $ 57,677 |
| JP Morgan | $ 479,953 | $ - | $ - | $ - | $ - | $ - | $ - | $ 692,212 | $ 764,784 | $ 702,117 | $ 624,071 | $ 446,441 | $ 3,709,578 |
| Repsol | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,575,420 | $ 4,153,940 | $ 7,371,277 | $ 7,443,657 | $ 3,990,869 | $ 26,535,162 |
| Shell | $ 590,442 | $ - | $ - | $ - | $ - | $ - | $ - | $ 355,176 | $ 478,304 | $ 449,559 | $ 492,449 | $ 442,576 | $ 2,808,507 |
| South Jersey | $ 433,087 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 433,087 |
| Southwestern | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 637,268 | $ 742,222 | $ 424,936 | $ 338,631 | $ 381,920 | $ 2,524,977 |
| Tenaska | $ 694,923 | $ - | $ - | $ - | $ - | $ - | $ - | $ 177,647 | $ 271,084 | $ 187,511 | $ 192,813 | $ 224,287 | $ 1,748,265 |
| Subtotal - Commodity Supply | $ 2,405,225 | $ - | $ - | $ - | $ - | $ - | $ - | $ 8,236,612 | $ 9,469,042 | $ 11,925,527 | $ 11,544,077 | $ 8,206,150 | $ 51,786,633 |
| Transportation Costs: | | | | | | | | | | | | | |
| Granite | $ - | $ - | $ - | $ - | $ - | $ - | $ 719 | $ 1,130 | $ 1,960 | $ 2,127 | $ 1,181 | $ 698 | $ 7,815 |
| Portland | $ 40 | $ - | $ - | $ - | $ - | $ - | $ - | $ 19,544 | $ 92,474 | $ 143,063 | $ 281,404 | $ 7,692 | $ 544,217 |
| Tennessee | $ 21,724 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,134 | $ 26,775 | $ 26,390 | $ 23,825 | $ 26,452 | $ 150,299 |
| Subtotal - Commodity Transporation | $ 21,764 | $ - | $ - | $ - | $ - | $ - | $ 719 | $ 45,808 | $ 121,209 | $ 171,580 | $ 306,410 | $ 34,842 | $ 702,331 |
| Commodity Cost Estimates | $ - | $ - | $ - | $ - | $ - | $ - | $ 8,280,703 | $ 9,557,706 | $ 11,951,898 | $ 11,855,487 | $ 8,248,633 | $ 1,758,047 | $ 51,652,474 |
| Commodity Cost Reversals | $ (2,426,470) | $ - | $ - | $ - | $ - | $ - | $ - | $ (8,280,703) | $ (9,557,706) | $ (11,951,898) | $ (11,855,487) | $ (8,248,633) | $ (52,320,897) |
| Subtotal - Supply | $ 519 | $ - | $ - | $ - | $ - | $ - | $ 8,281,422 | $ 9,559,424 | $ 11,984,442 | $ 12,000,696 | $ 8,243,633 | $ 1,750,406 | $ 51,820,542 |
| Withdrawal - Underground Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 210,556 | $ 1,010,923 | $ 4,632,461 | $ 4,465,520 | $ 2,118,662 | $ 399 | $ 12,438,520 |
| Withdrawal - LNG Vaporization | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| ATV Reconciliation Charges | $ (15) | $ - | $ - | $ - | $ - | $ - | $ (47,237) | $ (153,100) | $ (260,539) | $ (368,982) | $ (129,689) | $ (16,590) | $ (976,152) |
| Off System Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (862,013) | $ (130,789) | $ (1,810,007) | $ (1,430,662) | $ (1,201,054) | $ (5,434,525) |
| Net OBA Adjustment | $ - | $ - | $ - | $ - | $ - | $ - | $ (5,125) | $ 11,134 | $ (18,463) | $ (20,262) | $ (10,860) | $ (44,412) | $ (87,988) |
| Company Managed | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (173,599) | $ (590,542) | $ (1,550,965) | $ (2,289,226) | $ (1,034,108) | $ (5,638,440) |
| LNG Boiloff | $ - | $ - | $ - | $ - | $ - | $ - | $ 17,200 | $ 49,685 | $ 49,539 | $ 281,013 | $ 41,753 | $ 36,091 | $ 475,280 |
| Transportation Charges | $ 236,313 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 11,697 | $ (72,434) | $ 311,391 | $ 1,162,785 | $ 1,649,752 |
| Hedging Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Propane | $ - | $ - | $ - | $ - | $ - | $ - | $ 376 | $ 513 | $ 1,069 | $ 1,486 | $ 1,800 | $ 992 | $ 6,237 |
| Inventory Finance Charage | $ 631 | $ 736 | $ 870 | $ 956 | $ 1,013 | $ 1,156 | $ 1,179 | $ 1,170 | $ 948 | $ 546 | $ 337 | $ 263 | $ 9,804 |
| Prior Period Adjustments | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Subtotal- Other Commodity | $ 236,930 | $ 736 | $ 870 | $ 956 | $ 1,013 | $ 1,156 | $ 176,949 | $ (115,287) | $ 3,695,382 | $ 925,914 | $ (1,386,495) | $ (1,095,634) | $ 2,442,488 |
| **Off System Sales Estimates** | $ - | $ - | $ - | $ - | $ - | $ - | $ (1,119,041) | $ (714,834) | $ (3,360,971) | $ (3,719,889) | $ (2,235,162) | $ - | $ (11,149,897) |
| **Off System Sales Reversals** | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,119,041 | $ 714,834 | $ 3,360,971 | $ 3,719,889 | $ 2,235,162 | $ 11,149,897 |
| **Subtotal Estimates/Reversals** | $ - | $ - | $ - | $ - | $ - | $ - | $ (567,048) | $ 771,122 | $ (1,341,778) | $ 1,120,583 | $ 2,322,556 | $ 2,235,162 | $ 4,540,597 |
| **Total Commodity Costs** | $ 237,449 | $ 736 | $ 870 | $ 956 | $ 1,013 | $ 1,156 | $ 7,339,329 | $ 9,848,343 | $ 13,033,688 | $ 12,567,692 | $ 8,341,865 | $ 2,889,934 | $ 54,263,030 |

**NORTHERN UTILITIES, INC. - BOTH DIVISIONs**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 4: PURCHASED GAS COSTS ALLOCATED TO WINTER PERIOD**
**May 2014 - April 2015**

| Demand Costs | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pipeline Reservation** | | | | | | | | | | | | | |
| Alberta Northeast | $ 15,972 | $ 20,385 | $ 22,714 | $ 22,174 | $ 31,679 | $ 22,626 | $ 33,817 | $ 17,163 | $ 15,591 | $ 16,488 | $ 12,160 | $ 14,058 | **$ 244,827** |
| Algonquin | $ 33,939 | $ 33,970 | $ 33,969 | $ 33,967 | $ 33,969 | $ 33,969 | $ 33,969 | $ 33,969 | $ 33,949 | $ 33,954 | $ 33,817 | $ 33,814 | **$ 407,254** |
| DTE Energy | $ 649,970 | $ 659,264 | $ 659,201 | $ 646,076 | $ 637,032 | $ 630,386 | $ 626,722 | $ 609,658 | $ 571,107 | $ 913,759 | $ 918,784 | $ 948,231 | **$ 8,470,190** |
| Emera | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Granite State | $ 351,660 | $ 351,660 | $ 351,660 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | $ 386,330 | **$ 4,531,950** |
| Iroquois | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | $ 43,336 | **$ 520,036** |
| Portland | $ 44,270 | $ 44,270 | $ 44,270 | $ 44,270 | $ 44,270 | $ 44,270 | $ 44,270 | $ 2,567,668 | $ 2,567,668 | $ 2,567,668 | $ 1,657,796 | $ 1,657,796 | **$ 11,328,487** |
| Tennessee | $ 378,755 | $ 378,755 | $ 378,755 | $ 378,755 | $ 378,755 | $ 378,755 | $ 377,070 | $ 379,748 | $ 381,432 | $ 379,748 | $ 379,748 | $ 379,748 | **$ 4,550,022** |
| Texas Eastern | $ 5,306 | $ 5,306 | $ 5,306 | $ 5,306 | $ 5,296 | $ 5,296 | $ 5,296 | $ 5,296 | $ 5,295 | $ 5,295 | $ 5,416 | $ 5,416 | **$ 63,827** |
| Union/ Repsol | $ 32,536 | $ 32,829 | $ 33,334 | $ 33,407 | $ 29,809 | $ 32,578 | $ 31,996 | $ 31,963 | $ 31,390 | $ 45,229 | $ 43,811 | $ 43,395 | **$ 422,277** |
| Vector | $ 180,521 | $ 180,526 | $ 180,559 | $ 180,512 | $ 180,472 | $ 180,409 | $ 180,408 | $ 258,325 | $ 258,231 | $ 258,122 | $ 258,064 | $ 258,156 | **$ 2,554,303** |
| Total Pipeline Reservation | $ 1,736,265 | $ 1,750,299 | $ 1,753,103 | $ 1,774,133 | $ 1,770,948 | $ 1,757,955 | $ 1,763,214 | $ 4,333,456 | $ 4,294,330 | $ 4,649,928 | $ 3,739,261 | $ 3,770,281 | **$ 33,093,174** |
| **Product Demand** | | | | | | | | | | | | | |
| Alberta Northeast | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| BG | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Distrigas | $ 8,938 | $ 8,938 | $ 8,938 | $ 8,938 | $ 8,938 | $ 8,938 | $ 8,938 | $ 110,938 | $ 102,000 | $ 102,000 | $ 102,000 | $ 102,000 | **$ 581,500** |
| DTE Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Emera Energy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Repsol | $ 36,338 | $ 36,665 | $ 37,229 | $ 37,310 | $ 36,666 | $ 36,385 | $ 35,735 | $ 531,587 | $ 547,509 | $ 562,671 | $ 511,494 | $ 560,687 | **$ 2,970,276** |
| Shell | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 52,500 | $ 52,500 | $ 52,500 | $ 52,500 | $ 52,500 | **$ 262,500** |
| Total Product Demand | $ 45,275 | $ 45,602 | $ 46,166 | $ 46,248 | $ 45,603 | $ 45,323 | $ 44,673 | $ 695,025 | $ 702,009 | $ 717,171 | $ 665,994 | $ 715,187 | **$ 3,814,276** |
| **Storage Pipeline Transportation and Demand Reservation** | | | | | | | | | | | | | |
| Tennessee | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | $ 12,006 | **$ 144,075** |
| Texas Eastern | $ 172 | $ 172 | $ 171 | $ 171 | $ 170 | $ 165 | $ 166 | $ 167 | $ 167 | $ 167 | $ 169 | $ 169 | **$ 2,024** |
| Wash 10 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | $ 240,833 | **$ 2,890,000** |
| Company Managed | $ (129,346) | $ (60,696) | $ (61,811) | $ (60,399) | $ (60,723) | $ (57,419) | $ (61,335) | $ (1,107,717) | $ (1,075,602) | $ (1,025,402) | $ (1,062,413) | $ (945,168) | **$ (5,708,033)** |
| Total Storage and Demand Reservation | $ 123,665 | $ 192,315 | $ 191,199 | $ 192,611 | $ 192,287 | $ 195,585 | $ 191,670 | $ (854,711) | $ (822,595) | $ (772,396) | $ (809,404) | $ (692,159) | **$ (2,671,934)** |
| | | | | | | | | | | | | | |
| Demand Cost Estimates | $ 1,615,610 | $ 1,627,505 | $ 1,629,357 | $ 1,629,033 | $ 1,631,897 | $ 1,588,171 | $ 3,786,340 | $ 3,826,508 | $ 3,876,708 | $ 3,788,731 | $ 2,981,686 | $ 1,458,774 | **$ 29,440,320** |
| Demand Cost Reversals | $ (1,685,001) | $ (1,615,610) | $ (1,627,505) | $ (1,629,357) | $ (1,629,033) | $ (1,631,897) | $ (1,588,171) | $ (3,786,340) | $ (3,826,508) | $ (3,876,708) | $ (3,788,731) | $ (2,981,686) | **$ (29,666,547)** |
| Subtotal | $ (69,391) | $ 11,895 | $ 1,852 | $ (324) | $ 2,864 | $ (43,726) | $ 2,198,169 | $ 40,168 | $ 50,200 | $ (87,977) | $ (807,045) | $ (1,522,912) | **$ (226,227)** |
| | | | | | | | | | | | | | |
| **Total Direct Demand Costs** | $ 1,835,814 | $ 2,000,111 | $ 1,992,320 | $ 2,012,668 | $ 2,011,703 | $ 1,955,137 | $ 4,197,726 | $ 4,213,937 | $ 4,223,944 | $ 4,506,725 | $ 2,788,806 | $ 2,270,397 | **$ 34,009,289** |
| | | | | | | | | | | | | | |
| Amortization of PNGTS Rate Case Costs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | **$ -** |
| Capacity Release | $ (983,909) | $ (984,583) | $ (1,099,432) | $ (1,100,418) | $ (1,100,343) | $ (984,021) | $ (994,157) | $ (994,173) | $ (996,609) | $ (1,002,654) | $ (1,001,133) | $ (1,013,775) | **$ (12,255,208)** |
| Capacity Mitigation | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,700) | $ (3,764) | $ (3,393) | $ (2,732) | $ - | $ - | $ - | **$ (32,092)** |
| Production and Storage | $ - | $ - | $ - | $ - | $ - | $ - | $ 192,366 | $ 192,366 | $ 192,366 | $ 192,366 | $ 192,366 | $ 192,366 | **$ 1,154,193** |
| Miscellaneous Overhead | $ - | $ - | $ - | $ - | $ - | $ - | $ 132,061 | $ 132,061 | $ 132,061 | $ 132,061 | $ 132,061 | $ 132,061 | **$ 792,366** |
| | | | | | | | | | | | | | |
| **Total Indirect Demand Costs** | $ (987,609) | $ (988,284) | $ (1,103,132) | $ (1,104,119) | $ (1,104,043) | $ (987,722) | $ (673,495) | $ (673,140) | $ (674,914) | $ (678,228) | $ (676,706) | $ (689,349) | **$ (10,340,741)** |
| | | | | | | | | | | | | | |
| Demand Cost Estimates - Capacity Release | $ (974,632) | $ (1,090,147) | $ (235,885) | $ (1,090,322) | $ (648,241) | $ (975,079) | $ (972,277) | $ (971,790) | $ (972,876) | $ (972,395) | $ (973,323) | $ (837,640) | **$ (10,714,607)** |
| Demand Cost Reversals - Capacity Release | $ 1,036,697 | $ 974,632 | $ 1,090,147 | $ 235,885 | $ 1,090,322 | $ 648,241 | $ 975,079 | $ 972,277 | $ 971,790 | $ 972,876 | $ 972,395 | $ 973,323 | **$ 10,913,664** |
| **Subtotal** | $ 62,065 | $ (115,515) | $ 854,262 | $ (854,437) | $ 442,081 | $ (326,838) | $ 2,802 | $ 487 | $ (1,086) | $ 481 | $ (928) | $ 135,683 | **$ 199,057** |
| | | | | | | | | | | | | | |
| **Total Demand Costs** | $ 910,270 | $ 896,313 | $ 1,743,450 | $ 54,112 | $ 1,349,740 | $ 640,577 | $ 3,527,033 | $ 3,541,284 | $ 3,547,943 | $ 3,828,979 | $ 2,111,172 | $ 1,716,731 | **$ 23,867,605** |
| | | | | | | | | | | | | | |
| **Demand Costs Transferred to Summer Period** | $ (346,269) | $ (346,269) | $ (346,269) | $ (346,269) | $ (346,269) | $ (346,269) | $ - | $ - | $ - | $ - | $ - | $ - | **$ (2,077,616)** |
| | | | | | | | | | | | | | |
| **Net Demand Costs For Winter Period** | $ 564,001 | $ 550,044 | $ 1,397,181 | $ (292,157) | $ 1,003,471 | $ 294,308 | $ 3,527,033 | $ 3,541,284 | $ 3,547,943 | $ 3,828,979 | $ 2,111,172 | $ 1,716,731 | **$ 21,789,989** |
| | | | | | | | | | | | | | |
| **Total Gas Costs** | $ 801,450 | $ 550,779 | $ 1,398,051 | $ (291,202) | $ 1,004,484 | $ 295,464 | $ 10,866,363 | $ 13,389,627 | $ 16,581,631 | $ 16,396,670 | $ 10,453,037 | $ 4,606,666 | **$ 76,053,019** |

**Redacted**



**NORTHERN UTILITIES, INC. - BOTH DIVISIONS**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - UNITS**
**May 2014 - April 2015**

| Commodity Volumes: | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total Winter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | | | | | | | | | | | | | |
| DTE | | | | | | | | | | | | | |
| JP Morgan | | | | | | | | | | | | | |
| Repsol | | | | | | | | | | | | | |
| Shell | | | | | | | | | | | | | |
| South Jersey | | | | | | | | | | | | | |
| Southwestern | | | | | | | | | | | | | |
| Tenaska | | | | | | | | | | | | | |
| Subtotal - Commodity Supply | | | | | | | | | | | | | |
| **Transportation Volumes** | | | | | | | | | | | | | |
| Granite | | | | | | | | | | | | | |
| Portland | | | | | | | | | | | | | |
| Tennessee | | | | | | | | | | | | | |
| Subtotal - Commodity Transportation | | | | | | | | | | | | | |
| Commodity Volume Estimates | | | | | | | | | | | | | |
| Commodity Volume Reversals | | | | | | | | | | | | | |
| Subtotal - Supply | | | | | | | | | | | | | |
| Withdrawal - Underground Storage | | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | | | | | | | | | | | | | |
| ATV Reconciliation | | | | | | | | | | | | | |
| Off System Sales | | | | | | | | | | | | | |
| Net OBA Adjustment | | | | | | | | | | | | | |
| Company Managed | | | | | | | | | | | | | |
| LNG Boiloff | | | | | | | | | | | | | |
| Transportation Charges | | | | | | | | | | | | | |
| Hedging Costs | | | | | | | | | | | | | |
| Propane | | | | | | | | | | | | | |
| Prior Period Adjustment | | | | | | | | | | | | | |
| Subtotal - Other Commodity | | | | | | | | | | | | | |
| Off System & Company Managed Estimates | | | | | | | | | | | | | |
| Off System & Company Managed Reversals | | | | | | | | | | | | | |
| **Total Commodity Volumes** | | | | | | | | | | | | | |

**Redacted**

**NORTHERN UTILITIES, INC. - BOTH DIVISIONS**
**COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN COST PER UNIT**
**May 2014 - April 2015**

| **Commodity Volumes:** | **May-14** | **Jun-14** | **Jul-14** | **Aug-14** | **Sep-14** | **Oct-14** | **Nov-14** | **Dec-14** | **Jan-15** | **Feb-15** | **Mar-15** | **Apr-15** | **Total Winter** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barclays | [redacted] | | | | | | | | | | | | |
| Distrigas | | | | | | | | | | | | | |
| DTE | | | | | | | | | | | | | |
| JP Morgan | | | | | | | | | | | | | |
| Repsol | | | | | | | | | | | | | |
| Shell | | | | | | | | | | | | | |
| South Jersey | | | | | | | | | | | | | |
| Southwestern | | | | | | | | | | | | | |
| Tenaska | | | | | | | | | | | | | |
| Subtotal - Commodity Supply | | | | | | | | | | | | | |
| **Transportation Costs:** | | | | | | | | | | | | | |
| Granite | | | | | | | | | | | | | |
| Portland | | | | | | | | | | | | | |
| Tennessee | | | | | | | | | | | | | |
| Subtotal- Commodity Transportation | | | | | | | | | | | | | |
| Commodity Cost Estimates | | | | | | | | | | | | | |
| Commodity Cost Reversals | | | | | | | | | | | | | |
| Subtotal - Supply | | | | | | | | | | | | | |
| Withdrawal - Underground Storage | | | | | | | | | | | | | |
| Withdrawal - LNG Vaporization | | | | | | | | | | | | | |
| ATV Reconciliation Charges | | | | | | | | | | | | | |
| Off System Sales | | | | | | | | | | | | | |
| Net OBA Adjustment | | | | | | | | | | | | | |
| Company Managed | | | | | | | | | | | | | |
| LNG Boiloff | | | | | | | | | | | | | |
| Transportation Charges | | | | | | | | | | | | | |
| Hedging Costs | | | | | | | | | | | | | |
| Propane | | | | | | | | | | | | | |
| Inventory Finance Charage | | | | | | | | | | | | | |
| Prior Period Adjustments | | | | | | | | | | | | | |
| Subtotal - Other Commodity | | | | | | | | | | | | | |
| Off System Sales Estimates | | | | | | | | | | | | | |
| Off System Sales Reversals | | | | | | | | | | | | | |
| **Total Commodity Costs** | | | | | | | | | | | | | |

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**SCHEDULE 5: SALES AND TRANSPORTATION VOLUMES**
**May 2014 - April 2015**

| *New Hampshire* | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Throughput IN** | | | | | | | | | | | | | |
| *BTU Factor* | 1.033 | 1.037 | 1.033 | 1.031 | 1.026 | 1.026 | 1.028 | 1.032 | 1.038 | 1.040 | 1.033 | 1.029 | |
| *GST Meter Throughput (MC* | 400,652 | 351,228 | 308,511 | 314,116 | 336,173 | 439,537 | 732,361 | 900,908 | 1,196,940 | 1,180,897 | 1,001,995 | 615,556 | 7,778,874 |
| *Salem Meter (MCF)* | 16,158 | 11,799 | 10,795 | 11,573 | 13,023 | 20,959 | 43,867 | 59,116 | 83,871 | 85,696 | 66,078 | 32,039 | 454,974 |
| *GST Meter Throughput (DT* | 400,652 | 351,228 | 308,511 | 314,116 | 336,173 | 439,537 | 732,361 | 900,908 | 1,196,940 | 1,180,897 | 1,001,995 | 615,556 | 7,778,874 |
| *Salem Meter (DTH)* | 16,158 | 11,799 | 10,795 | 11,573 | 13,023 | 20,959 | 43,867 | 59,116 | 83,871 | 85,696 | 66,078 | 32,039 | 454,974 |
| *LNG/Propane* | | | | | | | | | | | | | |
| *Total Throughput* | 416,810 | 363,027 | 319,306 | 325,689 | 349,196 | 460,496 | 776,228 | 960,024 | 1,280,811 | 1,266,593 | 1,068,073 | 647,595 | 8,233,848 |
| **Throughput OUT** | | | | | | | | | | | | | |
| *Residential Gas* | | | | | | | | | | | | | |
| Charged | 109,776 | 56,260 | 37,768 | 32,977 | 35,829 | 58,729 | 123,697 | 237,569 | 323,308 | 386,936 | 328,732 | 214,074 | 1,945,655 |
| Uncharged Current | 31,549 | 10,289 | 18,082 | 19,158 | 40,093 | 63,900 | 132,335 | 179,357 | 185,433 | 182,273 | 157,295 | 69,627 | 1,089,391 |
| Uncharged Prior | -123,599 | -31,549 | -10,289 | -18,082 | -19,158 | -40,093 | -63,900 | -132,335 | -179,357 | -185,433 | -182,273 | -157,295 | -1,143,363 |
| **Total Residential Gas** | **17,726** | **35,000** | **45,561** | **34,053** | **56,764** | **82,536** | **192,132** | **284,591** | **329,384** | **383,776** | **303,755** | **126,406** | 1,891,683 |
| **Interruptible** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| *Commercial/Industrial Gas* | | | | | | | | | | | | | |
| Charged | 119,718 | 64,200 | 48,976 | 45,264 | 50,884 | 73,226 | 151,660 | 289,851 | 400,372 | 489,550 | 385,211 | 245,453 | 2,364,365 |
| Uncharged Current | 41,422 | 20,556 | 23,635 | 24,413 | 41,505 | 61,255 | 145,948 | 213,753 | 226,055 | 230,028 | 187,668 | 86,214 | 1,302,452 |
| Uncharged Prior | -139,537 | -41,422 | -20,556 | -23,635 | -24,413 | -41,505 | -61,255 | -145,948 | -213,753 | -226,055 | -230,028 | -187,668 | -1,355,776 |
| **Total C/I Gas** | **21,603** | **43,334** | **52,056** | **46,042** | **67,976** | **92,976** | **236,352** | **357,657** | **412,674** | **493,522** | **342,852** | **143,999** | 2,311,042 |
| *Transportation* | | | | | | | | | | | | | |
| Charged | 299,662 | 293,963 | 246,796 | 249,278 | 252,427 | 283,973 | 335,994 | 392,007 | 453,727 | 454,504 | 479,889 | 377,945 | 4,120,165 |
| Uncharged Current | 99,242 | 97,091 | 75,832 | 84,798 | 118,785 | 128,845 | 211,590 | 210,011 | 206,006 | 180,399 | 194,103 | 119,357 | 1,726,058 |
| Uncharged Prior | -176,984 | -99,242 | -97,091 | -75,832 | -84,798 | -118,785 | -128,845 | -211,590 | -210,011 | -206,006 | -180,399 | -194,103 | -1,783,685 |
| **Total Transportation** | **221,920** | **291,812** | **225,537** | **258,244** | **286,414** | **294,033** | **418,739** | **390,427** | **449,722** | **428,898** | **493,593** | **303,200** | **4,062,538** |
| **Company Use** | **117** | **54** | **110** | **150** | **108** | **78** | **112** | **233** | **349** | **415** | **373** | **237** | **2,336** |
| **Total Throughput OUT** | **261,366** | **370,200** | **323,263** | **338,489** | **411,262** | **469,623** | **847,336** | **1,032,908** | **1,192,129** | **1,306,611** | **1,140,572** | **573,841** | **8,267,599** |
| **Total Throughput IN** | **416,810** | **363,027** | **319,306** | **325,689** | **349,196** | **460,496** | **776,228** | **960,024** | **1,280,811** | **1,266,593** | **1,068,073** | **647,595** | **8,233,848** |
| **Difference IN/OUT** | 155,445 | -7,173 | -3,957 | -12,800 | -62,066 | -9,127 | -71,108 | -72,884 | 88,682 | -40,018 | -72,499 | 73,754 | -33,751 |
| **%** | | | | | | | | | | | | | -0.41% |

**Attachment A**

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**DEFERRED WINTER PERIOD WORKING CAPITAL ALLOWANCE ON PURCHASED GAS COSTS**
**May 2014 - April 2015**

**PEAK PERIOD - Acct 182.11**

| | | BEGINNING BALANCE | WORKING CAP ALLOWANCE (1) | WORKING CAP PERCENTAGE | WORKING CAP COLLECTIONS | WORKING CAP DEFERRED | ENDING BALANCE | AVE MONTHLY BALANCE | INTEREST RATE | INTEREST | ENDING BAL W/ INTEREST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E = B + D | F = A + E | G = (A + F) / 2 | H | I = G * (J / 12) | J = F + I |
| May 2014 | $ | (1,796) | 281 | 0.0824% | 561 | 841 | (955) | (1,376) | 3.25% | (4) | (959) |
| June | $ | (959) | 209 | 0.0824% | (1) | 208 | (750) | (854) | 3.25% | (2) | (753) |
| July | $ | (753) | 539 | 0.0824% | (0) | 539 | (213) | (483) | 3.25% | (1) | (215) |
| August | $ | (215) | (148) | 0.0824% | 0 | (148) | (363) | (289) | 3.25% | (1) | (364) |
| September | $ | (364) | 357 | 0.0824% | 0 | 358 | (6) | (185) | 3.25% | (1) | (7) |
| October | $ | (7) | 80 | 0.0824% | - | 80 | 73 | 33 | 3.25% | 0 | 74 |
| November | $ | 74 | 4,376 | 0.0824% | (3,182) | 1,193 | 1,267 | 670 | 3.25% | 2 | 1,269 |
| December | $ | 1,269 | 5,281 | 0.0824% | (5,197) | 84 | 1,353 | 1,311 | 3.25% | 4 | 1,357 |
| January 2015 | $ | 1,357 | 6,523 | 0.0824% | (7,813) | (1,290) | 66 | 712 | 3.25% | 2 | 68 |
| February | $ | 68 | 6,404 | 0.0824% | (7,965) | (1,561) | (1,492) | (712) | 3.25% | (2) | (1,494) |
| March | $ | (1,494) | 4,203 | 0.0824% | (5,210) | (1,007) | (2,501) | (1,998) | 3.25% | (5) | (2,507) |
| April | $ | (2,507) | 1,624 | 0.0824% | (2,652) | (1,027) | (3,534) | (3,020) | 3.25% | (8) | (3,542) |
| Totals | | | 29,730 | | (31,459) | | | | | (17) | |

(1) Working Capital Allowance calculated by taking monthly Total Gas Costs from Sch 4, page 2 of 12, and multiplying by (9.25/365)*Interest Rate.

**Attachment B**

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**2014-2015 WINTER PERIOD RECONCILIATION**
**WINTER PERIOD BAD DEBT EXPENSE - CALCULATION OF COLLECTION ALLOWANCE**
**May 2014 - April 2015**

**PEAK PERIOD - Acct 182.16**

| | REVISED BALANCE | BAD DEBT ALLOWANCE (1) | BAD DEBT COLLECTIONS | DEFERRED BALANCE | ENDING BALANCE | BAD DEBT AVE MO BALANCE | INTEREST RATE | INTEREST | END BAL W/ INTEREST |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D = B + C | E = A + D | F = (A + E) / 2 | G | H = F * (G/ 12) | I = E + H |
| May 2014 | (118,517) | 65,477 | 5,513 | 70,990 | (47,527) | (83,022) | 3.25% | (225) | (47,751) |
| June | (47,751) | 47,429 | (9) | 47,420 | (332) | (24,042) | 3.25% | (65) | (397) |
| July | (397) | 77,162 | (2) | 77,161 | 76,764 | 38,183 | 3.25% | 103 | 76,867 |
| August | 76,867 | 41,773 | 1 | 41,774 | 118,641 | 97,754 | 3.25% | 265 | 118,906 |
| September | 118,906 | 26,648 | 0 | 26,649 | 145,555 | 132,230 | 3.25% | 358 | 145,913 |
| October | 145,913 | 5,826 | (0) | 5,826 | 151,739 | 148,826 | 3.25% | 403 | 152,142 |
| November | 152,142 | 7,301 | (26,216) | (18,915) | 133,227 | 142,685 | 3.25% | 386 | 133,614 |
| December | 133,614 | 3,532 | (42,729) | (39,197) | 94,417 | 114,015 | 3.25% | 309 | 94,726 |
| January 2015 | 94,726 | (388) | (64,224) | (64,611) | 30,114 | 62,420 | 3.25% | 169 | 30,283 |
| February | 30,283 | 5,285 | (65,488) | (60,203) | (29,920) | 182 | 3.25% | 0 | (29,920) |
| March | (29,920) | 7,243 | (42,839) | (35,596) | (65,515) | (47,717) | 3.25% | (129) | (65,645) |
| April | (65,645) | 23,450 | (21,834) | 1,616 | (64,028) | (64,836) | 3.25% | (176) | (64,204) |
| Totals | | 310,739 | (257,826) | | | | | 1,399 | |

(1) Per Docket No. DG 11-69, Bad Debt based on actual write-offs

**Attachment C**

**Northern Utilities, Inc. - New Hampshire Division**
**Environmental Response Costs**
**May 2014 - October 2015**

| | | Beginning Balance | | Firm Sales and Transportation (therms | ERC Rate Recoveries /Passback | | Current ERC Recoveries/ Passbacks | | Ending Balance |
|---|---|---|---|---|---|---|---|---|---|
| May 2014 | (act) | $ 9,512 | | 4,432,890 | $ 0.0031 | | $ 13,743 | | $ (4,231) |
| June 2014 | (act) | $ (4,231) | | 3,249,176 | $ 0.0031 | | $ 10,075 | | $ (14,306) |
| July 2014 | (act) | $ (14,306) | | 2,431,861 | $ 0.0031 | | $ 7,539 | | $ (21,845) |
| August 2014 | (act) | $ (21,845) | | 2,415,172 | $ 0.0031 | | $ 7,487 | | $ (29,332) |
| September 2014 | (act) | $ (29,332) | | 2,515,212 | $ 0.0031 | | $ 7,798 | | $ (37,130) |
| October 2014 | (act) | $ (37,130) | | 3,229,806 | $ 0.0025 | (2) | $ 10,014 | | $ (47,145) |
| November 2014 | (act) | $ 102,403 | (1) | 5,285,980 | $ 0.0018 | | $ 11,770 | (3) | $ 90,633 |
| December 2014 | (act) | $ 90,633 | | 8,266,004 | $ 0.0018 | | $ 14,873 | | $ 75,761 |
| January 2015 | (act) | $ 75,761 | | 11,009,539 | $ 0.0018 | | $ 19,813 | | $ 55,948 |
| February 2015 | (act) | $ 55,948 | | 12,624,536 | $ 0.0018 | | $ 22,725 | | $ 33,223 |
| March 2015 | (act) | $ 33,223 | | 10,920,726 | $ 0.0018 | | $ 19,655 | | $ 13,568 |
| April 2015 | (act) | $ 13,568 | | 7,386,741 | $ 0.0018 | | $ 13,299 | | $ 270 |
| May 2015 | (act) | $ 270 | | 3,749,297 | $ 0.0018 | | $ 6,743 | | $ (6,474) |
| June 2015 | (est) | $ (6,474) | | 3,131,772 | $ 0.0018 | | $ 5,635 | | $ (12,109) |
| July 2015 | (est) | $ (12,109) | | 1,411,825 | $ 0.0018 | | $ 2,541 | | $ (14,650) |
| August 2015 | (est) | $ (14,650) | | 1,536,025 | $ 0.0018 | | $ 2,765 | | $ (17,415) |
| September 2015 | (est) | $ (17,415) | | 2,049,326 | $ 0.0018 | | $ 3,689 | | $ (21,104) |
| October 2015 | (est) | $ (21,104) | | 3,911,290 | $ 0.0018 | | $ 7,040 | | $ (28,144) |

(1) November Beginning Balance includes $149,548 amortization from all prior years at 1/7 of annual costs. (See Section 4.7 of Tariff.)

(2) November Current ERC Recoveries/Passbacks reflect an Average ERC Rate based on actual Firm Sales and Transportation (therms) at $0.0031 and actual Firm Sales and Transportation (therms) at $0.0018.

(3) November 2014 includes Reclasses.

Attachment D

**NORTHERN UTILITIES**
**NEW HAMPSHIRE DIVISION**
**RLIARA Reconciliation**
**May 2014 - October 2015**

| | | Beginning Balance | Program Costs | Regulatory Assessments | RLIARA Recoveries | Ending Balance | Average Monthly Balance | Interest Rate | Interest | | Ending Balance w/Interest |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E = A+B+C-D | F = (A+E)/2 | G | H = F*(G/12) | | I = E+H |
| May 2014 | Actual | $ (194,247) | $ 28,018 | $ 10,765 | $ 28,812 | $ (184,275) | $ (189,261) | 3.25% | $ (513) | | $ (184,788) |
| June 2014 | Actual | $ (184,788) | $ 20,907 | $ 10,765 | $ 21,117 | $ (174,232) | $ (179,510) | 3.25% | $ (486) | | $ (174,718) |
| July 2014 | Actual | $ (174,718) | $ 18,099 | $ 10,765 | $ 15,799 | $ (161,653) | $ (168,185) | 3.25% | $ (456) | | $ (162,108) |
| August 2014 | Actual | $ (162,108) | $ 16,715 | $ 11,821 | $ 15,691 | $ (149,263) | $ (155,686) | 3.25% | $ (422) | | $ (149,684) |
| September 2014 | Actual | $ (149,684) | $ 17,049 | $ 11,293 | $ 16,344 | $ (137,686) | $ (143,685) | 3.25% | $ (389) | | $ (138,075) |
| October 2014 | Actual | $ (138,075) | $ 18,960 | $ 18,772 | $ 20,999 | $ (121,342) | $ (129,709) | 3.25% | $ (351) | | $ (121,694) |
| November 2014 | Actual | $ (121,694) | $ 28,703 | $ 1,914 | $ 38,976 | $ (130,053) | $ (125,873) | 3.25% | $ (401) | | $ (130,453) |
| December 2014 | Actual | $ (130,453) | $ 46,285 | $ 13,152 | $ 64,484 | $ (135,501) | $ (132,977) | 3.25% | $ (360) | | $ (135,861) |
| January 2015 | Actual | $ (135,861) | $ 55,213 | $ 13,152 | $ 85,879 | $ (153,375) | $ (144,619) | 3.25% | $ (392) | | $ (153,767) |
| February 2015 | Actual | $ (153,767) | $ 62,494 | $ 15,373 | $ 98,473 | $ (174,373) | $ (164,070) | 3.25% | $ (444) | | $ (174,818) |
| March 2015 | Actual | $ (174,818) | $ 67,640 | $ 14,262 | $ 85,184 | $ (178,100) | $ (176,459) | 3.25% | $ (478) | | $ (178,578) |
| April 2015 | Actual | $ (178,578) | $ 49,146 | $ 44,995 | $ 57,616 | $ (142,052) | $ (160,315) | 3.25% | $ (434) | | $ (142,486) |
| May 2015 | Actual | $ (142,486) | $ 32,787 | $ 35,173 | $ 29,243 | $ (103,769) | $ (123,127) | 3.25% | $ (333) | | $ (104,102) |
| June 2015 | Actual | $ (104,102) | $ 21,719 | $ 20,935 | $ 24,422 | $ (85,870) | $ (94,986) | 3.25% | $ 226 | (1) | $ (85,645) |
| July 2015 | Est. | $ (85,645) | $ 18,099 | $ 10,765 | $ 10,246 | $ (67,026) | $ (76,335) | 3.25% | $ (207) | | $ (67,233) |
| August 2015 | Est. | $ (67,233) | $ 16,715 | $ 11,821 | $ 11,012 | $ (49,709) | $ (58,471) | 3.25% | $ (158) | | $ (49,867) |
| September 2015 | Est. | $ (49,867) | $ 17,049 | $ 11,293 | $ 11,981 | $ (33,505) | $ (41,686) | 3.25% | $ (113) | | $ (33,618) |
| October 2015 | Est. | $ (33,618) | $ 18,960 | $ 18,772 | $ 15,985 | $ (11,872) | $ (22,745) | 3.25% | $ (62) | | $ (11,935) |

(1) True up to Regulatory Assessment.

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**SALES VARIANCE ANALYSIS**
**WINTER 2014 - 2015**



| | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | TOTAL |
|---|---|---|---|---|---|---|---|
| Forecast Billed Month Sales | 279,218 | 473,854 | 707,838 | 715,832 | 621,488 | 406,405 | 3,204,635 |
| Actual Sales | 275,357 | 527,420 | 723,679 | 876,487 | 713,943 | 459,528 | 3,576,414 |
| Difference | (3,861) | 53,566 | 15,841 | 160,655 | 92,455 | 53,123 | 371,779 |
| Add: | | | | | | | |
| Volume Variance due to Weather | | | | | | | |
| Normal Bil. Month Actual Sales | 262,219 | 443,074 | 660,194 | 667,908 | 579,574 | 393,810 | 3,006,778 |
| Actual Sales | 275,357 | 527,420 | 723,679 | 876,487 | 713,943 | 459,528 | 3,576,414 |
| Weather Variance | (13,138) | (84,347) | (63,486) | (208,579) | (134,369) | (65,718) | (569,636) |
| Total Variance Excluding Weather (excl weather effect) | (16,999) | (30,780) | (47,644) | (47,924) | (41,914) | (12,595) | (197,857) |
| Variance-difference due to meter count | | | | | | | 439,084 |
| -difference in load pattern | | | | | | | (67,303) |
| SALES | | | | | | | 371,780 |

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION**
**SALES VARIANCE ANALYSIS**
**WINTER 2014 - 2015**

| | NORMAL MMBtu | | | METERS | | |
|---|---|---|---|---|---|---|
| | 2014-15 Forecast | 2014-15 Actual | Difference | 2014-15 Forecast | 2014-15 Actual | Difference |
| Res Heat | 1,456,250 | 1,592,965 | 136,715 | 135,492 | 137,500 | 2,008 |
| Res General | 19,402 | 21,353 | 1,951 | 9,579 | 8,878 | (701) |
| Total Res | 1,475,652 | 1,614,318 | 138,666 | 145,071 | 146,378 | 1,307 |
| G-40 | 783,907 | 801,454 | 17,547 | 25,950 | 26,503 | 553 |
| G-50 | 84,470 | 90,389 | 5,919 | 4,424 | 4,522 | 98 |
| G-41 | 646,682 | 732,965 | 86,283 | 2,148 | 2,769 | 621 |
| G-51 | 114,566 | 140,623 | 26,057 | 722 | 851 | 129 |
| G-42 | 76,967 | 145,826 | 68,859 | 30 | 79 | 49 |
| G-52 | 22,390 | 50,840 | 28,450 | 6 | 24 | 18 |
| Total C & I | 1,728,982 | 1,962,096 | 233,114 | 33,279 | 34,748 | 1,469 |
| Total Company | 3,204,634 | 3,576,414 | 371,780 | 178,350 | 181,126 | 2,776 |

| | AVERAGE USE | | | Change in Sales Due to Change In: | | | |
|---|---|---|---|---|---|---|---|
| | 2014-15 Forecast | 2014-15 Actual | Difference | Meter Count | Load Pattern | Total Chg MMBtu | % Difference |
| Res Heat | 10.75 | 11.59 | 0.84 | 21,578 | 115,137 | 136,715 | 9.39% |
| Res General | 2.03 | 2.41 | 0.38 | (1,419) | 3,370 | 1,951 | 10.05% |
| Total Res | 12.77 | 13.99 | 1.22 | 20,159 | 118,507 | 138,666 | 9.40% |
| G-40 | 30.21 | 30.24 | 0.03 | 16,714 | 834 | 17,547 | 2.24% |
| G-50 | 19.09 | 19.99 | 0.89 | 1,876 | 4,042 | 5,919 | 7.01% |
| G-41 | 301.07 | 264.70 | (36.37) | 186,984 | (100,701) | 86,283 | 13.34% |
| G-51 | 158.68 | 165.24 | 6.57 | 20,468 | 5,589 | 26,057 | 22.74% |
| G-42 | 2,565.57 | 1,845.90 | (719.67) | 125,713 | (56,854) | 68,859 | 89.47% |
| G-52 | 3,731.67 | 2,118.32 | (1,613.35) | 67,170 | (38,720) | 28,450 | 127.06% |
| Total C & I | 51.95 | 56.47 | 4.51 | 418,925 | (185,810) | 233,114 | 13.48% |
| Total Company | 17.97 | 19.75 | 1.78 | 439,084 | (67,303) | 371,780 | 11.60% |

# Schedule 16

**NORTHERN UTILITIES, INC.- NEW HAMPSHIRE DIVISION**
**Residential Low Income Assistance and Regulatory Assessment Costs (RLIARA)**

| | | Customer Charge | First Block | Last Block | Total |
|---|---|---|---|---|---|
| 1 | **Peak Period** | | | | |
| 2 | R-5 Base Rates | $21.36 | $0.6239 | $0.5103 | |
| 3 | R-10 Rate at 40% of R5 | $8.54 | $0.2496 | $0.2041 | |
| 4 | Program Subsidy | $12.82 | $0.3743 | $0.3062 | |
| 5 | Average Annual Therms | | 211 | 428 | 639 |
| 6 | | | | | |
| 7 | Peak Period Subsidy | $76.90 | $78.94 | $131.08 | $286.92 |
| 8 | | | | | |
| 9 | **Off Peak Period** | | | | |
| 10 | R-5 Base Rates | $21.36 | $0.5449 | $0.5449 | |
| 11 | R10 Rate at 40% of R5 | $8.54 | $0.2179 | $0.2179 | |
| 12 | Program Subsidy | $12.82 | $0.3270 | $0.3270 | |
| 13 | Average Annual Therms | | 115 | 29 | 144 |
| 14 | | | | | |
| 15 | Off Peak Period Subsidy | $76.90 | $37.68 | $9.42 | $123.99 |
| 16 | | | | | |
| 17 | Estimated Annual Subsidy | | | | $410.91 |
| 18 | | | | | |
| 19 | Number of Estimated 2015/16 Participants | | | | 1,143 |
| 20 | | | | | |
| 21 | Annual Subsidy times Number of Participants (Ln 17 *Ln 19) | | | | $469,670 |
| 22 | Prior Year Ending Balance 10/31/2015 - RLIARA Page 2 | | | | ($33,940) |
| 23 | Estimated Annual Administrative Costs | | | | $0 |
| 24 | Estimated Non-Distribution Regulatory Assessment (Based off of NHPUC invoice dated September 1, 2015) | | | | $278,676 |
| 25 | Total Program Costs | | | | $714,406 |
| 26 | | | | | |
| 27 | Estimated weather normalized firm therms billed for | | | | |
| 28 | the twelve months ended 10/31/16 sales and transportation | | | | 72,355,914 |
| 29 | (Attachment 2 to Schedule 10B, Page 1 of 3, "Total Division" | | | | |
| 30 | subtract "Special Contracts"). | | | | |
| 31 | **Total Residential Low Income Assistance and Regulatory Assessment Costs Charge** | | | | **$0.0099** |

**NORTHERN UTILITIES, INC., NEW HAMPSHIRE DIVISION**
**NOVEMBER 2014 THROUGH OCTOBER 2015**
**RESIDENTIAL LOW INCOME ASSISTANCE AND REGULATORY ASSESSMENT COSTS (RLIARA) RECONCILIATION**

| | | | | | | | | | | | (Estimate) | (Estimate) | (Estimate) | (Estimate) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **FOR THE MONTH OF:** | **Nov-14** | **Dec-14** | **Jan-15** | **Feb-15** | **Mar-15** | **Apr-15** | **May-15** | **Jun-15** | **Jul-15** | **Aug-15** | **Sep-15** | **Oct-15** | **Total** |
| 2 | **DAYS IN MONTH** | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 365 |
| 3 | | | | | | | | | | | | | | **Average** |
| 4 | RLIA Participant Count | 1,033 | 1,140 | 1,108 | 1,082 | 1,393 | 1,283 | 1,305 | 1,135 | 1,133 | 1,055 | 1,053 | 1,001 | 1,143 |
| 5 | | | | | | | | | | | | | | **Total** |
| 6 | Beginning Balance | ($121,694) | ($130,453) | ($135,861) | ($153,767) | ($174,818) | ($178,578) | ($142,486) | ($104,102) | ($85,645) | ($60,961) | ($49,544) | ($39,298) | ($121,694) |
| 7 | | | | | | | | | | | | | | |
| 8 | Add: Actual Costs | $28,703 | $46,285 | $55,213 | $62,494 | $67,640 | $49,146 | $32,787 | $21,719 | $19,739 | $12,787 | $12,694 | $13,568 | $422,776 |
| 9 | | | | | | | | | | | | | | |
| 10 | Add: Regulatory Assessments | $1,914 | $13,152 | $13,152 | $15,373 | $14,262 | $44,995 | $35,173 | $20,935 | $27,408 | $23,223 | $23,223 | $23,223 | $256,033 |
| 11 | | | | | | | | | | | | | | |
| 12 | Less: Collected Revenue | $38,976 | $64,484 | $85,879 | $98,473 | $85,184 | $57,616 | $29,243 | $24,422 | $22,265 | $24,440 | $25,553 | $31,332 | ($587,868) |
| 13 | | | | | | | | | | | | | | |
| 14 | Add: Administrative and Start Up Costs | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 15 | | | | | | | | | | | | | | |
| 16 | Ending Balance Pre-Interest | ($130,053) | ($135,501) | ($153,375) | ($174,373) | ($178,100) | ($142,052) | ($103,769) | ($85,870) | ($60,763) | ($49,391) | ($39,180) | ($33,839) | |
| 17 | | | | | | | | | | | | | | |
| 18 | Month's Average Balance | ($125,873) | ($132,977) | ($144,618) | ($164,070) | ($176,459) | ($160,315) | ($123,127) | ($94,986) | ($73,204) | ($55,176) | ($44,362) | ($36,568) | |
| 19 | | | | | | | | | | | | | | |
| 20 | Interest Rate | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | |
| 21 | | | | | | | | | | | | | | |
| 22 | Interest Applied | ($400.55) | ($360.15) | ($391.67) | ($444.36) | ($477.91) | ($434.19) | ($333.47) | $225.83 | ($198.26) | ($152.30) | ($118.50) | ($100.94) | ($3,186) |
| 23 | | | | | | | | | | | | | | |
| 24 | Ending Balance | ($130,453) | ($135,861) | ($153,767) | ($174,818) | ($178,578) | ($142,486) | ($104,102) | ($85,645) | ($60,961) | ($49,544) | ($39,298) | **($33,940)** | ($33,940) |

Note- June 2015 Interest Applied line items includes true ups for Regulatory Assessment Costs.

**NORTHERN UTILITIES, INC., NEW HAMPSHIRE DIVISION**
**Calculation of Distribution and Non-Distribution Revenues of the NHPUC Annual Regulatory Assessment**
NHPUC Assessment Invoice dated September 1, 2015

| | July 2015 | August 2015 | September 2015 | October 2015 | November 2015 | December 2015 | January 2016 | February 2016 | March 2016 | April 2016 | May 2016 | June 2016 | Total Fiscal Year | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Distribution | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $7,589.60 | $91,075.17 | 1 |
| Non-Distribution | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $23,223.00 | $278,676.00 | 2 |
| Total | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $30,812.60 | $369,751.17 | |

(1) The $91,075.17 for Distribution represents the amount included in the test year in Docket DG 13-086.
(2) Total Invoice amount minus Distribution amount.

# Northern Utilities, Inc. -- New Hampshire Division

**DSM Budget**

| | Residential | Low-Income | Gen Service | Total |
|---|---|---|---|---|
| August-15 | $70,948 | $36,255 | $100,019 | $207,222 |
| September-15 | $37,299 | $18,128 | $128,283 | $183,710 |
| October-15 | $35,474 | $18,128 | $76,148 | $129,750 |
| November-15 | $35,474 | $18,128 | $66,982 | $120,584 |
| December-15 | $173,138 | $87,013 | $69,562 | $329,713 |
| January-16 | $28,003 | $10,444 | $34,005 | $72,453 |
| February-16 | $33,521 | $12,533 | $45,146 | $91,199 |
| March-16 | $41,288 | $14,622 | $35,505 | $91,415 |
| April-16 | $39,038 | $14,622 | $56,286 | $109,946 |
| May-16 | $28,003 | $10,444 | $34,005 | $72,453 |
| June-16 | $96,461 | $35,510 | $80,068 | $212,039 |
| July-16 | $22,486 | $8,355 | $22,865 | $53,706 |
| August-16 | $55,590 | $20,888 | $67,427 | $143,905 |
| September-16 | $30,253 | $10,444 | $68,927 | $109,624 |
| October-16 | $28,003 | $10,444 | $34,005 | $72,453 |
| Total | $754,980 | $325,959 | $919,233 | $2,000,172 |

**Budget with Low-Income Costs Allocated to Residential and General Service Classes**

| | Residential | Low-Income | Gen Service | Total |
|---|---|---|---|---|
| August-15 | $75,762 | 0 | $131,460 | $207,222 |
| September-15 | $39,786 | 0 | $143,924 | $183,710 |
| October-15 | $38,638 | 0 | $91,112 | $129,750 |
| November-15 | $39,775 | 0 | $80,809 | $120,584 |
| December-15 | $197,929 | 0 | $131,784 | $329,713 |
| January-16 | $31,060 | 0 | $41,393 | $72,453 |
| February-16 | $37,268 | 0 | $53,932 | $91,199 |
| March-16 | $45,539 | 0 | $45,876 | $91,415 |
| April-16 | $43,176 | 0 | $66,771 | $109,946 |
| May-16 | $30,513 | 0 | $41,939 | $72,453 |
| June-16 | $102,395 | 0 | $109,644 | $212,039 |
| July-16 | $23,706 | 0 | $30,000 | $53,706 |
| August-16 | $58,396 | 0 | $85,510 | $143,905 |
| September-16 | $31,702 | 0 | $77,922 | $109,624 |
| October-16 | $29,844 | 0 | $42,608 | $72,453 |
| Total | $825,489 | $0 | $1,174,683 | $2,000,172 |

# DSM Charge Factor Calculation

**DSM Charge Factors for Residential Customers**

| | | |
|---|---|---|
| DSM Reconciliation Adjustment | ($173,801) | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- November 2015 Beginning Balance |
| DSM Costs | $611,259 | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- Column 2 |
| DSM Share Holder Incentive | $45,747 | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- Column 3 |
| DSM Low-Income Costs | $60,044 | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- Column 4 |
| DSM Allocated Low-Income Share Holder Incentive | $3,777 | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- Column 5 |
| Total | $547,025 | |
| Forecasted Annual Throughput Volumes for Residential Customers | 18,447,921 | Schedule 16 DSM Page 3 Nov '15 - Oct '16 Totals- Column 6 |
| **Conservation Charge Factor for Residential Customers** | **$0.0297** | |

**DSM Charge Factors for Commercial and Industrial Customers (C&I)**

| | | |
|---|---|---|
| DSM Reconciliation Adjustment | ($79,052) | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- November 2015 Beginning Balance |
| DSM Costs | $614,783 | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- Column 2 |
| DSM Share Holder Incentive | $45,413 | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- Column 3 |
| DSM Low-Income Costs | $193,404 | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- Column 4 |
| DSM Allocated Low-Income Share Holder Incentive | $13,051 | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- Column 5 |
| Total | $787,598 | |
| Forecasted Annual Throughput Volumes for C&I Customers | 53,907,994 | Schedule 16 DSM Page 4 Nov '15 - Oct '16 Totals- Column 6 |
| **Conservation Charge Factor for C&I Customers** | **$0.0146** | |

# Northern Utilities, Inc.

## New Hampshire Division

## Calculation of the DSM Charge, a Component of the Local Distribution Adjustment Charge

## To Be Effective November 1, 2015 through October 31, 2016

## Residential Customers

| | | Beginning Balance (Over)/Under | DSM Rate per Therm | DSM Collections | DSM Costs | DSM SHI | Allocated Low Income Costs | Allocated Low Income SHI | Ending Balance (Over)/Under | Average Balance (Over)/Under | Interest Prime Rate | Interest @ Prime Rate | Ending Balance plus Interest (Over)/Under | Therm Sales | # of Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| August-14 | Actual | ($215,753) | $0.0393 | $12,959 | $17,656 | $3,913 | $32,757 | $2,603 | ($171,783) | ($193,768) | 3.25% | ($516) | ($172,299) | 329,770 | 31 |
| September-14 | Actual | ($172,299) | $0.0393 | $14,080 | $39,180 | $3,913 | $2,752 | $269 | ($140,264) | ($156,110) | 3.25% | ($417) | ($140,681) | 358,299 | 30 |
| October-14 | Actual | ($140,681) | $0.0393 | $23,079 | $23,773 | ($2,920) | $1,176 | $102 | ($141,629) | ($140,338) | 3.25% | ($387) | ($142,017) | 587,293 | 31 |
| November-14 | Actual | ($142,017) | $0.0350 | $46,031 | $32,203 | $3,913 | $8,859 | $62 | ($143,011) | ($142,514) | 3.25% | ($381) | ($143,392) | 1,236,969 | 30 |
| December-14 | Actual | ($143,392) | $0.0350 | $83,139 | $99,832 | $3,913 | $9,084 | $790 | ($112,911) | ($128,151) | 3.25% | ($354) | ($113,265) | 2,375,693 | 31 |
| January-15 | Actual | ($113,265) | $0.0350 | $113,160 | $43,513 | $4,191 | $1,732 | $151 | ($176,838) | ($145,052) | 3.25% | ($400) | ($177,239) | 3,233,082 | 31 |
| February-15 | Actual | ($177,239) | $0.0350 | $135,430 | $58,873 | $4,191 | $1,663 | $145 | ($247,797) | ($212,518) | 3.25% | ($530) | ($248,327) | 3,869,365 | 28 |
| March-15 | Actual | ($248,327) | $0.0350 | $115,055 | $37,429 | $4,191 | $1,762 | $153 | ($319,846) | ($284,087) | 3.25% | ($784) | ($320,630) | 3,287,324 | 31 |
| April-15 | Actual | ($320,630) | $0.0350 | $74,930 | $36,177 | $4,191 | $1,402 | $122 | ($353,668) | ($337,149) | 3.25% | ($901) | ($354,568) | 2,140,745 | 30 |
| May-15 | Actual | ($354,568) | $0.0350 | $29,535 | $41,874 | $4,191 | $1,035 | $90 | ($336,913) | ($345,740) | 3.25% | ($954) | ($337,867) | 843,672 | 31 |
| June-15 | Actual | ($337,867) | $0.0350 | $18,493 | $30,115 | $4,191 | $762 | $66 | ($321,225) | ($329,546) | 3.25% | ($880) | ($322,105) | 528,117 | 30 |
| July-15 | Actual | ($322,105) | $0.0350 | $13,152 | $36,026 | $4,191 | $735 | $64 | ($294,240) | ($308,173) | 3.25% | ($1,315) | ($295,555) | 375,458 | 31 |
| August-15 | Forecast | ($295,555) | $0.0350 | $12,309 | $70,948 | **$5,311** | $4,814 | $192 | ($226,598) | ($261,076) | 3.25% | ($721) | ($227,318) | 351,681 | 31 |
| September-15 | Forecast | ($227,316) | $0.0350 | $12,589 | $37,299 | $3,913 | $2,487 | $199 | ($196,007) | ($211,662) | 3.25% | ($565) | ($196,572) | 359,672 | 30 |
| October-15 | Forecast | ($196,572) | $0.0350 | $19,522 | $35,474 | $3,913 | $3,164 | $253 | ($173,290) | ($184,931) | 3.25% | ($510) | ($173,801) | 557,777 | 31 |
| **November-15** | Forecast | **($173,801)** | $0.0297 | $40,778 | $35,474 | $3,913 | $4,301 | $344 | ($170,547) | ($172,174) | 3.25% | ($460) | ($171,007) | 1,375,208 | 30 |
| December-15 | Forecast | ($171,007) | $0.0297 | $70,386 | $173,138 | $3,913 | $24,791 | $413 | ($39,138) | ($105,072) | 3.25% | ($290) | ($39,428) | 2,373,707 | 31 |
| January-16 | Forecast | ($39,428) | $0.0297 | $95,040 | $28,003 | $3,792 | $3,057 | $408 | ($99,208) | ($69,318) | 3.25% | ($191) | ($99,400) | 3,205,146 | 31 |
| February-16 | Forecast | ($99,400) | $0.0297 | $99,196 | $33,521 | $3,792 | $3,747 | $416 | ($157,119) | ($128,260) | 3.25% | ($320) | ($157,439) | 3,345,309 | 28 |
| March-16 | Forecast | ($157,439) | $0.0297 | $80,938 | $41,288 | $3,792 | $4,251 | $405 | ($188,641) | ($173,040) | 3.25% | ($478) | ($189,119) | 2,729,545 | 31 |
| April-16 | Forecast | ($189,119) | $0.0297 | $57,774 | $39,038 | $3,792 | $4,138 | $394 | ($199,531) | ($194,325) | 3.25% | ($519) | ($200,050) | 1,948,381 | 30 |
| May-16 | Forecast | ($200,050) | $0.0297 | $34,210 | $28,003 | $3,792 | $2,510 | $335 | ($199,620) | ($199,835) | 3.25% | ($552) | ($200,172) | 1,153,704 | 31 |
| June-16 | Forecast | ($200,172) | $0.0297 | $17,653 | $96,461 | $3,792 | $5,934 | $233 | ($111,405) | ($155,789) | 3.25% | ($416) | ($111,821) | 595,347 | 30 |
| July-16 | Forecast | ($111,821) | $0.0297 | $11,329 | $22,486 | $3,792 | $1,220 | $203 | ($95,449) | ($103,635) | 3.25% | ($286) | ($95,735) | 382,063 | 31 |
| August-16 | Forecast | ($95,735) | $0.0297 | $10,891 | $55,590 | $3,792 | $2,806 | $187 | ($44,251) | ($69,993) | 3.25% | ($193) | ($44,444) | 367,276 | 31 |
| September-16 | Forecast | ($44,444) | $0.0297 | $11,296 | $30,253 | $3,792 | $1,449 | $193 | ($20,052) | ($32,248) | 3.25% | ($86) | ($20,138) | 380,946 | 30 |
| October-16 | Forecast | ($20,138) | $0.0297 | $17,533 | $28,003 | $3,792 | $1,841 | $246 | ($3,790) | ($11,964) | 3.25% | ($33) | ($3,823) | 591,289 | 31 |
| Nov 15 thru Oct 16 Totals | | | | $547,025 | $611,259 | $45,747 | $60,044 | $3,777 | | | | | | 18,447,921 | |

Forecast therm Sales from Company Forecast as seen in Attachment 2 to Schedule 10 B, Page 1 of 3, filed on September 16, 2015 in this Cost of Gas Docket.

Note- August 2015 DSM SHI includes a PI Allocation adjustment for 2014 trueup.

## Northern Utilities, Inc.

### New Hampshire Division

### Calculation of the DSM Charge, a Component of the Local Distribution Adjustment Charge

### To Be Effective November 1, 2015 through October 31, 2016

### General Service Customers

| | | Beginning Balance (Over)/Under | DSM Rate per Therm | DSM Collections | DSM Costs | DSM SHI | Allocated Low Income Costs | Allocated Low Income SHI | Ending Balance (Over)/Under | Average Balance (Over)/Under | Interest Prime Rate | Interest @ Prime Rate | Ending Balance plus Interest (Over)/Under | Therm Sales | # of Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| August-14 | Actual | ($346,272) | $0.0131 | $27,318 | $26,543 | $3,750 | $59,552 | $5,178 | ($278,568) | ($312,420) | 3.25% | ($881) | ($279,449) | 2,085,402 | 31 |
| September-14 | Actual | ($279,449) | $0.0131 | $28,255 | $81,034 | $3,750 | $6,576 | $572 | ($215,773) | ($247,611) | 3.25% | ($661) | ($216,434) | 2,156,913 | 30 |
| October-14 | Actual | ($216,434) | $0.0131 | $34,616 | $84,361 | $3,473 | $1,687 | $147 | ($161,383) | ($188,909) | 3.25% | ($635) | ($162,018) | 2,642,513 | 31 |
| November-14 | Actual | ($162,018) | $0.0138 | $55,107 | $81,016 | $3,750 | $17,439 | $1,516 | ($113,404) | ($137,711) | 3.25% | ($368) | ($113,772) | 4,049,011 | 30 |
| December-14 | Actual | ($113,772) | $0.0138 | $81,288 | $81,405 | $3,750 | $19,304 | $1,679 | ($88,923) | ($101,347) | 3.25% | ($280) | ($89,203) | 5,890,311 | 31 |
| January-15 | Actual | ($89,203) | $0.0138 | $107,318 | $9,532 | $3,706 | $4,165 | $362 | ($178,755) | ($133,979) | 3.25% | ($370) | ($179,125) | 7,776,457 | 31 |
| February-15 | Actual | ($179,125) | $0.0138 | $120,821 | $12,393 | $3,706 | $3,762 | $327 | ($279,759) | ($229,441) | 3.25% | ($572) | ($280,331) | 8,755,171 | 28 |
| March-15 | Actual | ($280,331) | $0.0138 | $105,342 | $43,655 | $3,706 | $4,092 | $356 | ($333,864) | ($307,098) | 3.25% | ($847) | ($334,711) | 7,633,402 | 31 |
| April-15 | Actual | ($334,711) | $0.0138 | $72,394 | $47,542 | $3,706 | $3,436 | $299 | ($352,122) | ($343,417) | 3.25% | ($917) | ($353,039) | 5,245,997 | 30 |
| May-15 | Actual | ($353,039) | $0.0138 | $40,098 | $8,486 | $3,706 | $3,565 | $310 | ($377,071) | ($365,055) | 3.25% | ($1,008) | ($378,079) | 2,905,625 | 31 |
| June-15 | Actual | ($378,079) | $0.0138 | $35,930 | $11,211 | $3,706 | $3,756 | $327 | ($395,009) | ($386,544) | 3.25% | ($1,033) | ($396,042) | 2,603,655 | 30 |
| July-15 | Actual | ($396,042) | $0.0138 | $34,214 | $12,727 | $3,706 | $4,856 | $422 | ($408,545) | ($402,293) | 3.25% | ($646) | ($409,190) | 2,479,286 | 31 |
| August-15 | Forecast | ($409,190) | $0.0138 | $19,483 | $100,019 | **$23,301** | $31,441 | $1,256 | ($272,656) | ($340,923) | 3.25% | ($941) | ($273,597) | 1,411,825 | 31 |
| September-15 | Forecast | ($273,597) | $0.0138 | $21,197 | $128,283 | $3,706 | $15,640 | $1,250 | ($145,914) | ($209,755) | 3.25% | ($560) | ($146,474) | 1,536,025 | 30 |
| October-15 | Forecast | ($146,474) | $0.0138 | $28,281 | $76,148 | $3,706 | $14,964 | $1,196 | ($78,741) | ($112,608) | 3.25% | ($311) | ($79,052) | 2,049,326 | 31 |
| November-15 | Forecast | **($79,052)** | $0.0146 | $64,597 | $66,982 | $3,706 | $13,827 | $1,105 | ($58,029) | ($68,541) | 3.25% | ($183) | ($58,212) | 4,421,380 | 30 |
| December-15 | Forecast | ($58,212) | $0.0146 | $87,042 | $69,562 | $3,706 | $62,222 | $1,036 | ($8,728) | ($33,470) | 3.25% | ($92) | ($8,820) | 5,957,667 | 31 |
| January-16 | Forecast | ($8,820) | $0.0146 | $113,172 | $34,005 | $3,800 | $7,388 | $985 | ($75,814) | ($42,317) | 3.25% | ($117) | ($75,931) | 7,746,173 | 31 |
| February-16 | Forecast | ($75,931) | $0.0146 | $114,592 | $45,146 | $3,800 | $8,786 | $977 | ($131,815) | ($103,873) | 3.25% | ($259) | ($132,074) | 7,843,357 | 28 |
| March-16 | Forecast | ($132,074) | $0.0146 | $97,297 | $35,505 | $3,800 | $10,371 | $988 | ($178,706) | ($155,390) | 3.25% | ($429) | ($179,135) | 6,659,619 | 31 |
| April-16 | Forecast | ($179,135) | $0.0146 | $72,126 | $56,286 | $3,800 | $10,484 | $999 | ($179,692) | ($179,414) | 3.25% | ($479) | ($180,171) | 4,936,730 | 30 |
| May-16 | Forecast | ($180,171) | $0.0146 | $53,284 | $34,005 | $3,800 | $7,934 | $1,058 | ($186,657) | ($183,414) | 3.25% | ($506) | ($187,163) | 3,647,059 | 31 |
| June-16 | Forecast | ($187,163) | $0.0146 | $43,356 | $80,068 | $3,800 | $29,577 | $1,160 | ($115,915) | ($151,539) | 3.25% | ($405) | ($116,320) | 2,967,529 | 30 |
| July-16 | Forecast | ($116,320) | $0.0146 | $32,635 | $22,865 | $3,800 | $7,135 | $1,190 | ($113,966) | ($115,143) | 3.25% | ($318) | ($114,284) | 2,233,750 | 31 |
| August-16 | Forecast | ($114,284) | $0.0146 | $34,583 | $67,427 | $3,800 | $18,083 | $1,206 | ($58,351) | ($86,318) | 3.25% | ($238) | ($58,589) | 2,367,038 | 31 |
| September-16 | Forecast | ($58,589) | $0.0146 | $34,546 | $68,927 | $3,800 | $8,995 | $1,200 | ($10,214) | ($34,401) | 3.25% | ($92) | ($10,306) | 2,364,564 | 30 |
| October-16 | Forecast | ($10,306) | $0.0146 | $40,369 | $34,005 | $3,800 | $8,603 | $1,147 | ($3,119) | ($6,712) | 3.25% | ($19) | ($3,138) | 2,763,126 | 31 |
| Nov 15 thru Oct 16 Totals | | | | $787,596 | $614,783 | $45,413 | $193,404 | $13,051 | | | | | | 53,907,993 | |

Forecast therm Sales from Company Forecast as seen in Attachment 2 to Schedule 10 B, Page 1 of 3, filed on September 16, 2015 in this Cost of Gas Docket. Does not include Special Contracts.

Note- August 2015 DSM SHI includes a PI Allocation adjustment for 2014 trueup.

## CALCULATION OF ENVIRONMENTAL RESPONSE COST RATE

November 1, 2015 through October 31, 2016

| | | |
|---|---|---|
| Total ERC Costs for the Period | $132,297 | (See 2015 ERC Filing) |
| Less Current (Over) Collection (Estimated) | ($33,536) | (See page 2 of 2) |
| Less Total RCE/RPC (Over)-Collection from Docket No. DG 13-086 | ($257,113) | |
| Total ERC Cost to be Recovered | ($158,352) | |
| Forcasted Firm Sales & Firm Transportation Volumes<br>(Attachment 2 to Schedule 10B, Page 1 of 3, "Total Division" subtract "Special Contracts"). | 72,355,914 | |
| **ERC Recovery Rate** | **($0.0022)** | |

# Northern Utilities, Inc. - New Hampshire Division
# Environmental Response Cost 12 Month Reconciliation

| Month | Actual or Forecast | Beginning Balance (Over)/Under | Revenue | New ERC Costs To be recovered | Ending Balance |
|---|---|---|---|---|---|
| | | | | | |
| August | Actual | ($21,845) | $7,487 | | ($29,332) |
| September | Actual | ($29,332) | $7,798 | | ($37,130) |
| October | Actual | ($37,130) | $10,014 | | ($47,145) |
| November-'14 | Actual | ($47,145) | $11,770 | $149,548 | $90,633 |
| December | Actual | $90,633 | $14,873 | | $75,761 |
| January- '15 | Actual | $75,761 | $19,813 | | $55,948 |
| February | Actual | $55,948 | $22,725 | | $33,223 |
| March | Actual | $33,223 | $19,655 | | $13,568 |
| April | Actual | $13,568 | $13,299 | | $270 |
| May | Actual | $270 | $6,743 | | ($6,474) |
| June | Actual | ($6,474) | $5,635 | | ($12,109) |
| July | Actual | ($12,109) | $5,137 | | ($17,247) |
| August | Est. | ($17,247) | $4,802 | | ($22,050) |
| September | Est. | ($22,050) | $4,987 | | ($27,038) |
| October | Est. | ($27,038) | $6,497 | | ($33,536) |

# Schedule 17

**NORTHERN UTILITIES, INC.- NEW HAMPSHIRE DIVISION**
**REMEDIATION ADJUSTMENT CLAUSE COMPLIANE FILING**
**2014-2015 ENVIORMENTAL RESPONSE COSTS**
**SITE SPECIFIC EXPENSES**

**SCHEDULE 1**


| Line | Description | Total | 11/09 - 10/10 | 11/10 - 10/11 | 11/11 - 10/12 | 11/12 - 10/13 | 11/13 - 10/14 | 11/14 10/15 | 11/15-10/16 | 11/16-10/17 | 11/17-10/18 | 11/18-10/19 | 11/19-10/20 | 11/20-10/21 | 11/21-10/22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ENVIRONMENTAL RESPONSE COST (ERC) | | | | | | | | | | | | | | |
| 1 | July 08 - June 09 Expenses Amortization (1/7) | $ 127,728 | $ 18,247 | $ 18,247 | $ 18,247 | $ 18,247 | $ 18,247 | $ 18,247 | $ 18,247 | | | | | | |
| 2 | July 09 - June 10 Expenses Amortization (1/7) | $ 189,634 | | $ 27,091 | $ 27,091 | $ 27,091 | $ 27,091 | $ 27,091 | $ 27,091 | $ 27,091 | | | | | |
| 3 | July 10 - June 11 Expenses Amortization (1/7) | $ 121,209 | | | $ 17,316 | $ 17,316 | $ 17,316 | $ 17,316 | $ 17,316 | $ 17,316 | $ 17,316 | | | | |
| 4 | July 11 - June 12 Expenses Amortization (1/7) | $ 159,020 | | | | $ 22,717 | $ 22,717 | $ 22,717 | $ 22,717 | $ 22,717 | $ 22,717 | $ 22,717 | | | |
| 5 | July 12 - June 13 Expenses Amortization (1/7) | $ 175,406 | | | | | $ 25,058 | $ 25,058 | $ 25,058 | $ 25,058 | $ 25,058 | $ 25,058 | $ 25,058 | | |
| 7 | July 13 - June 14 Expenses Amortization (1/7) | $ 40,881 | | | | | | $ 5,840 | $ 5,840 | $ 5,840 | $ 5,840 | $ 5,840 | $ 5,840 | $ 5,840 | |
| 8 | July 14 - June 15 Expenses Amortization (1/7) | $ 112,198 | | | | | | | $ 16,028 | $ 16,028 | $ 16,028 | $ 16,028 | $ 16,028 | $ 16,028 | $ 16,028 |
| 9 | Subtotal (Line 1 through Line 7) | $ 926,077 | $ 18,247 | $ 45,337 | $ 62,653 | $ 85,370 | $ 110,428 | $ 116,268 | $ 132,297 | $ 114,050 | $ 86,959 | $ 69,644 | $ 46,926 | $ 21,868 | $ 16,028 |
| 10 | Add: Excess amortization from prior years (from schedule 5, Line 10) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 11 | Less: Excess amortization to be deferred (from schedule 5, Line 9) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 12 | Total Enviromental Response cost to be recovered (ERC) | $ 926,077 | $ 18,247 | $ 45,337 | $ 62,653 | $ 85,370 | $ 110,428 | $ 116,268 | $ 132,297 | $ 114,050 | $ 86,959 | $ 69,644 | $ 46,926 | $ 21,868 | $ 16,028 |
| 15 | July 2008 - June 2009 Unamortized beginning balance | | $ 127,728 | $ 109,481 | $ 91,234 | $ 72,987 | $ 54,741 | $ 36,494 | $ 18,247 | | | | | | |
| 16 | July 2009 - June 2010 Unamortized beginning balance | | | $ 189,634 | $ 162,544 | $ 135,453 | $ 108,362 | $ 81,272 | $ 54,181 | $ 27,091 | | | | | |
| 17 | July 2010 - June 2011 Unamortized beginning balance | | | | $ 121,209 | $ 103,893 | $ 86,578 | $ 69,262 | $ 51,947 | $ 34,631 | $ 17,316 | | | | |
| 18 | July 2011 - June 2012 Unamortized beginning balance | | | | | $ 159,020 | $ 136,303 | $ 113,586 | $ 90,869 | $ 68,151 | $ 45,434 | $ 22,717 | | | |
| 19 | July 2012 - June 2013 Unamortized beginning balance | | | | | | $ 175,406 | $ 152,689 | $ 129,972 | $ 107,255 | $ 84,537 | $ 61,820 | $ 39,103 | | |
| 20 | July 2013 - June 2014 Unamortized beginning balance | | | | | | | $ 40,881 | $ 35,041 | $ 29,201 | $ 23,361 | $ 17,521 | $ 11,680 | $ 5,840 | |
| 21 | July 2014 - June 2015 Unamortized beginning balance | | | | | | | | $ 112,198 | $ 96,170 | $ 80,142 | $ 64,113 | $ 48,085 | $ 32,057 | $ 16,028 |
| 22 | Total Unamortized beginning balance | | $ 127,728 | $ 299,115 | $ 374,987 | $ 471,354 | $ 385,984 | $ 300,613 | $ 492,454 | $ 362,499 | $ 250,790 | $ 166,171 | $ 98,868 | $ 37,897 | $ 16,028 |
| 23 | INSURANCE/3RD PARTY EXPENSES (IE) Expenses (from schedule 2) | | | | | | | | | | | | | | |
| 24 | INSURANCE/3RD PARTY RECOVERIES (IR) | | | | | | | | | | | | | | |
| 25 | UNDER/OVER Recovery from previous year | | | | | | | | | | | | | | |
| 26 | **Total of Lines 15, 16, 17, 18** | | $ 127,728 | $ 299,115 | $ 374,987 | $ 471,354 | $ 385,984 | $ 300,613 | $ 492,454 | $ 362,499 | $ 250,790 | $ 166,171 | $ 98,868 | $ 37,897 | $ 16,028 |

# Schedule 18

**Northern Utilities, Inc.- New Hampshire**
**Calculation of Balancing Charge**

**November 2015 through October 2016**

| | | MDQ | Max Swing | % MDQ |
|---|---|---|---|---|
| 1 | New Hampshire Underground | 15,124 | 3,532 | 23.35% |
| 2 | LNG | 0 | 0 | 0.00% |
| 3 | Propane | 0 | 0 | 0.00% |

| | | % MDQ | Costs | Balancing Costs | % Allocated | Allocated Costs |
|---|---|---|---|---|---|---|
| 4 | New Hampshire Underground | | | | | |
| 5 | Del., Res., and Transp. | 23.35% | $9,845,974 | $2,299,369 | 0.22% | $5,139 |
| 6 | Capacity | 23.35% | $1,253,001 | $292,618 | 35.64% | $104,284 |
| 7 | LNG | 0.00% | $316,739 | $0 | 0.00% | $0 |
| 8 | Propane | 0.00% | $0 | $0 | 0.00% | $0 |
| 9 | Total | | $11,415,714 | $2,591,987 | | $109,423 |
| 10 | Annual Sum of Absolute Swings | | | | | 142,624 |
| 11 | Balancing Rate Per MMBtu Swing | | | | | **$0.77** |

Note: LNG and LP MDQ allocated based on NH's current PR-Allocator percentage. 42.42%

**Northern Utilities, Inc.**
**Calculation of Balancing Charge**
**Costs of Balancing Resources**
**November 2015 through October 2016**

| | | | | | | |
|---|---|---|---|---|---|---|
| **New Hampshire** | | Northern | Division | | | |
| El Paso FS Storage | | Capacity | Allocated | Rate | Months | Costs |
| Capacity | Cap | 259,337 | 110,011 | $0.0205 | 12 | $27,063 |
| Deliverability | Del | 4,243 | 1,800 | $1.4938 | 12 | $32,264 |
| Firm Transportation-Tenn | Trans | 2,653 | 1,125 | $8.1668 | 12 | $110,291 |
| Firm Transportation-GSGT | Trans | 2,653 | 1,125 | $4.1513 | 12 | $56,063 |
| Total | | | | | | $225,680 |
| | | | | | | |
| W-10 Storage | | | | | | |
| W-10 | Cap | 34,000 | 14,423 | $ 7.0833 | 12 | $1,225,938 |
| PNGTS | Trans | 33,000 | 13,999 | $ 49.3701 | 5 | $3,455,561 |
| Vector - In | Trans | 17,172 | 7,284 | $ 7.6042 | 12 | $664,701 |
| Vector -Out | Trans | 17,086 | 7,248 | $ 4.5625 | 5 | $165,342 |
| TCPL | Trans | 34,000 | 14,423 | $ 26.9504 | 12 | $4,664,403 |
| Firm Transportation-GSGT | Trans | 33,000 | 13,999 | $ 4.1513 | 12 | $697,349 |
| Total | | | | | | $10,873,294 |
| | | | | | | |
| **Maine** | | Northern | Division | | | |
| | Type | Capacity | Allocated | Rate | Months | Costs |
| **El Paso FS Storage** | | | | | | |
| Capacity | Cap | 259,337 | 149,326 | $0.0205 | 12 | $36,734 |
| Deliverability | Del | 4,243 | 2,443 | $1.4938 | 12 | $43,794 |
| Firm Transportation-Tenn | Trans | 2,653 | 1,528 | $8.1668 | 12 | $149,707 |
| Firm Transportation-GSGT | Trans | 2,653 | 1,528 | $4.1513 | 12 | $76,098 |
| Total | | | | | | $306,334 |
| **W-10 Storage** | | | | | | |
| W-10 | Cap | 34,000 | 19,577 | $ 7.0833 | 12 | $1,664,062 |
| PNGTS | Trans | 33,000 | 19,001 | $ 49.3701 | 5 | $4,690,505 |
| Vector - In | Trans | 17,172 | 9,888 | $ 7.6042 | 12 | $902,251 |
| Vector -Out | Trans | 17,086 | 9,838 | $ 4.5625 | 5 | $224,432 |
| TCPL | Trans | 34,000 | 19,577 | $ 26.9504 | 12 | $6,331,360 |
| Firm Transportation-GSGT | Trans | 33,000 | 19,001 | $ 4.1513 | 12 | $946,566 |
| Total | | | | | | $14,759,177 |
| LNG | | | | | | |
| NH | | 10,000 | 4,242 | | | |
| ME | | 4,000 | 5,758 | | | $316,739 |
| Total | | | | | | $316,739 |
| Propane | | | | | | |
| Capacity | | | | | | |
| NH | | 0 | 0 | | | |
| ME | | 0 | 0 | | | |
| Total | | | | | | $0 |
| Maine Summary | | | | | | |
| | Del | 4,243 | 2,443 | | | $43,794 |
| | Res | 0 | 0 | | | $0 |
| | Trans | 139,564 | 80,361 | | | $13,320,920 |
| | Cap | 293,337 | 168,903 | | | $1,700,796 |
| | Total | 437,144 | 251,708 | | | $15,065,511 |
| | Gate Station Delivery | 35,653 | 20,529 | | | |
| | | | | | | |
| New Hampshire Summary | | | | | | |
| | Del | 4,243 | 1,800 | | | **$32,264** |
| | Res | 0 | 0 | | | **$0** |
| | Trans | 139,564 | 59,203 | | | **$9,813,710** |
| | Cap | 293,337 | 124,434 | | | **$1,253,001** |
| | Total | 437,144 | 185,436 | | | $11,098,975 |
| | Gate Station Delivery | 35,653 | **15,124** | | | |

**Northern Utilities, Inc.**
**Calculation of Balancing Charge**
**Analysis of Swings**

| | Division | UGS Maximum Swings | UGS Sum Positive Swings | Northern UGS Withdrawals | Allocated UGS Withdrawals | Positive UGS Swings as a % of UGS Withdrawals |
|---|---|---|---|---|---|---|
| 1 | NH | **3,532** | 3,811 | 4,019,426 | 1,705,041 | **0.22%** |
| 2 | ME | 7,580 | 1,635 | 4,019,426 | 2,314,385 | 0.07% |

| | Division | LP Max. Swing | LP Sum Positive Swings | LP Tank Capacity | LP Allocated Tank Capacity | LP Swings as a % of Tank Capacity |
|---|---|---|---|---|---|---|
| 3 | NH | 0 | 0 | 25,733 | 10,916 | 0.00% |
| 4 | ME | 0 | 0 | 25,733 | 14,817 | 0.00% |

| | Division | LNG Max. Swing | LNG Sum Positive Swings | LNG Tank Capacity | LNG Allocated Tank Capacity | LNG Swings as a % of Tank Capacity |
|---|---|---|---|---|---|---|
| 5 | NH | 0 | (9,481) | 13,750 | 5,833 | 162.55% |
| 6 | ME | 1,418 | (26,271) | 13,750 | 7,917 | 331.82% |

| | Division | UGS Absolute Value All Swings | UGS Total Absolute Value All Swings | Northern UGS Capacity | Allocated UGS Capacity | Positive UGS Swings as a % of UGS Withdrawals |
|---|---|---|---|---|---|---|
| 7 | NH | 45,999 | 36,518 | 293,337 | 124,434 | 36.97% |
| 8 | ME | 94,294 | 68,023 | 293,337 | 168,903 | 55.83% |
| 9 | Total | 140,292 | 104,540 | | 293,337 | **35.64%** |

| | Division | | UGS Max Abs Cum. All Swings | | Allocated UGS Capacity | |
|---|---|---|---|---|---|---|
| 10 | NH | | 49,355 | | 124,434 | |
| 11 | ME | | 34,012 | | 168,903 | 57.58% |
| 12 | Total | | 83,367 | | 293,337 | **28.42%** |

**Northern Utilities, Inc.**
**Calculation of Suppliler Balancing Charge**

**Derivation of Absolute Swings**
**May 2000 through April 2001**
**Summary**

| | | Sum Positive Swings | | Sum Negative Swings | | Sum LP / LNG Swings | | ABS all Swings | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Ports-NH | Port-Maine | Ports-NH | Port-Maine | Ports-NH | Port-Maine | Ports-NH | 52.76% | ABS Swings |
| 1 | May | 1,060 | 1,484 | 8,125 | 1,162 | 0 | 0 | 9,185 | | 9,185 |
| 2 | June | 0 | 28 | 1,213 | 5,553 | 0 | 0 | 1,213 | 5,582 | 6,794 |
| 3 | July | 1,125 | 0 | 0 | 0 | 0 | 0 | 1,125 | 0 | 1,125 |
| 4 | Aug | 45 | 0 | 99 | 1,027 | 0 | 0 | 145 | 1,027 | 1,172 |
| 5 | Sept | 0 | 0 | 301 | 11,279 | 0 | 0 | 301 | 11,279 | 11,580 |
| 6 | Oct | 1,196 | 123 | 2,821 | 26,853 | 0 | 0 | 4,017 | 26,976 | 30,993 |
| 7 | Nov | 384 | 0 | 3,976 | 7,620 | (2,382) | (2,539) | 6,743 | 10,159 | 16,901 |
| 8 | Dec | 0 | 0 | 7,956 | 12,177 | 0 | 0 | 7,956 | 12,177 | 20,133 |
| 9 | Jan | 0 | 0 | 1,873 | 174 | (423) | (13,355) | 2,296 | 13,530 | 15,826 |
| 10 | Feb | 0 | 0 | 2,807 | 542 | (4,431) | (4,339) | 7,238 | 4,880 | 12,118 |
| 11 | March | 0 | 0 | 1,048 | 0 | (2,245) | (6,038) | 3,293 | 6,038 | 9,331 |
| 12 | April | 0 | 0 | 2,487 | 0 | 0 | 0 | 2,487 | 0 | 2,487 |
| 13 | Total | 3,811 | 1,635 | 32,707 | 66,387 | (9,481) | (26,271) | 45,999 | 94,294 | 140,292 |
| 14 | | | | add back 10% of the scheduled deliveries= | | | | 96,625 | 97,195 | 193,819 |
| 15 | | | | | | Total ABS Swings = | | **142,624** | **191,488** | 334,112 |

# Schedule 19

**Northern Utilities - New Hampshire Division**
**Capacity Assignment Calculations 2015-2016**
**<u>Derivation of Class Assignments and Weightings</u>**

Basic assumptions:

1 The MBA method allocates capacity costs based on design day demands in two pieces:
   a The base use portion of the class design day demand based on base use
   b The remaining portion of design day demand based on remaining design day demand
2 Base demand is composed solely of pipeline supplies
3 Remaining demand consists of a portion of pipeline and all storage and peaking supplies

| | | Design Day Demand. Th | Adjusted Design Day Demand, Dt | Percent of Total | Avg Daily Base Use Load, Dt | Remaining Design Day Demand |
|---|---|---|---|---|---|---|
| 1 | RATE A-Resi Non-Htg | 2,940 | 329 | 0.6% | 45 | 284 |
| 2 | RATE B-Resi Htg | 200,250 | 22,427 | 43.8% | 1,358 | 21,069 |
| 3 | RATE G-40 | 107,490 | 12,038 | 23.5% | 480 | 11,558 |
| 4 | RATE G-50 | 9,750 | 1,092 | 2.1% | 248 | 844 |
| 5 | RATE G-41 | 77,770 | 8,710 | 17.0% | 606 | 8,104 |
| 6 | RATE G-51 | 14,660 | 1,642 | 3.2% | 484 | 1,157 |
| 7 | RATE G-42 | 19,090 | 2,138 | 4.2% | 124 | 2,014 |
| 8 | RATE G-52 | 8,480 | 950 | 1.9% | 674 | 276 |
| 9 | Special Contract | 7,245 | 811 | 1.6% | 595 | 216 |
| 10 | RATE T-40 | 1,563 | 175 | 0.3% | 84 | 91 |
| 11 | RATE T-50 | 152 | 17 | 0.0% | 70 | - |
| 12 | RATE T-41 | 5,098 | 571 | 1.1% | 299 | 272 |
| 13 | RATE T-51 | 1,148 | 129 | 0.3% | 492 | - |
| 14 | RATE T-42 | 1,462 | 164 | 0.3% | 164 | - |
| 15 | RATE T-52 | 281 | 31 | 0.1% | 230 | - |
| 16 | Total | 457,378 | 51,224 | 100.0% | 5,954 | 45,886 |
| 17 | | | | | | - |
| 18 | Residential Total | 203,190 | 22,756 | 44.4% | 1,403 | 21,353 |
| 19 | LLF Total | 212,472 | 23,796 | 46.5% | 1,757 | 22,039 |
| 20 | HLF Total | 41,716 | 4,672 | 9.1% | 2,794 | 1,878 |
| 21 | Total | 457,378 | 51,224 | 100.0% | 5,954 | 45,270 |
| 22 | | | | | | |
| 23 | | | | | | |

| 24 | | Resdential MDQ, Dt | Total C&I MDQ, Dt | LLF C&I MDQ, Dt | HLF C&I MDQ, Dt | Total MDQ, Dt |
|---|---|---|---|---|---|---|
| 25 | Residential Allocation | | | | | |
| 26 | Pipeline - Base | 2,645 | 3,309 | 1,278 | 2,031 | 5,954 |
| 27 | Pipeline - Remaining | 4,736 | 5,924 | 5,459 | 465 | 10,660 |
| 28 | Storage | 6,695 | 8,376 | 7,718 | 658 | 15,071 |
| 29 | Peaking | 8,680 | 10,859 | 10,006 | 853 | 19,539 |
| 30 | Total | 22,756 | 28,468 | 24,460 | 4,007 | 51,224 |
| 31 | | | | | | |
| 32 | | | | | | |

| 33 | Caapcity Allocations %s | **LLF C&I** | **HLF C&I** |
|---|---|---|---|
| 34 | | | |
| 35 | Pipeline | **27.54%** | **62.30%** |
| 36 | Storage | **31.55%** | **16.42%** |
| 37 | Peaking | **40.91%** | **21.28%** |
| 38 | Total | **100.00%** | **100.00%** |

## Schedule 20

## Provided in the Summer 2016 Cost-of Gas Filing

# Schedule 21

## Northern Utilities
## Simplified Market Based Allocator (MBA) Calculations
## ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

### Total Fixed Capacity Costs To Be Allocated

| | NUI Total |
|---|---|
| Pipeline Demand | $ 9,154,859 |
| Storage Demand | $ 26,158,307 |
| Peaking Demand | $ 5,475,642 |
| Subtotal Demand | $ 40,788,808 |
| | |
| Capacity Release (Credit) | $ (64,987) |
| Asset Management (Credit) | $ (9,565,000) |
| Total Net Demand Costs | $ 31,158,821 |

### Proportional Responsibility (PR) Allocators

**Allocation of Product and Pipeline Demand Costs (including Injections) to Months**

| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design Year Pipeline Sendout | 1,453,194 | 1,288,023 | 1,237,486 | 1,128,257 | 1,284,982 | 1,141,241 | 621,751 | 456,059 | 431,653 | 439,435 | 483,114 | 716,558 | 10,681,751 |
| Rank | 1 | 2 | 4 | 6 | 3 | 5 | 8 | 10 | 12 | 11 | 9 | 7 | |
| % Max Month | 100.00% | 88.63% | 85.16% | 77.64% | 88.42% | 78.53% | 42.79% | 31.38% | 29.70% | 30.24% | 33.24% | 49.31% | |
| PR | 11.37% | 0.10% | 1.66% | 4.72% | 1.09% | 0.18% | 1.19% | 0.11% | 2.48% | 0.05% | 0.21% | 0.93% | 24.09% |
| CumPR | 24.09% | 12.72% | 11.53% | 9.69% | 12.62% | 9.87% | 4.04% | 2.64% | 2.48% | 2.52% | 2.85% | 4.97% | 100.00% |
| Product and Pipeline Demand Costs | $ 2,205,054 | $ 1,164,506 | $ 1,055,188 | $ 887,248 | $ 1,154,927 | $ 903,607 | $ 369,652 | $ 241,541 | $ 226,611 | $ 231,068 | $ 260,479 | $ 454,976 | $ 9,154,859 |

**Allocation of Storage Injection Fees to Months**

| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Storage Injection Volume | - | - | - | - | - | 29,679 | 30,668 | 29,679 | 30,668 | 30,668 | 29,679 | 30,668 | 211,710 |
| Design Year Pipeline Sendout | 1,453,194 | 1,288,023 | 1,237,486 | 1,128,257 | 1,284,982 | 1,141,241 | 621,751 | 456,059 | 431,653 | 439,435 | 483,114 | 716,558 | 10,681,751 |
| % of Deliveries Injected | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.5% | 4.7% | 6.1% | 6.6% | 6.5% | 5.8% | 4.1% | 1.9% |
| Injection Fees | $ - | $ - | $ - | $ - | $ - | $ 22,903 | $ 17,376 | $ 14,758 | $ 15,032 | $ 15,074 | $ 15,076 | $ 18,674 | $ 118,894 |

**Allocation of Storage Demand Costs to Months**

| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design Year Storage | - | 777,812 | 905,414 | 949,914 | 653,281 | - | - | - | - | - | - | - | 3,286,419 |
| Rank | 5 | 3 | 2 | 1 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| % Max Month | 0.00% | 81.88% | 95.32% | 100.00% | 68.77% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| PR | 0.00% | 4.37% | 6.72% | 4.68% | 17.19% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 32.96% |
| CumPR | 0.00% | 21.56% | 28.28% | 32.96% | 17.19% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| Storage Demand Costs | $ - | $ 5,640,532 | $ 7,397,457 | $ 8,622,879 | $ 4,497,439 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 26,158,307 |
| Plus Injection Fees | $ - | $ - | $ - | $ - | $ - | $ 22,903 | $ 17,376 | $ 14,758 | $ 15,032 | $ 15,074 | $ 15,076 | $ 18,674 | $ 118,894 |
| TOTAL | $ - | $ 5,640,532 | $ 7,397,457 | $ 8,622,879 | $ 4,497,439 | $ 22,903 | $ 17,376 | $ 14,758 | $ 15,032 | $ 15,074 | $ 15,076 | $ 18,674 | $ 26,277,201 |

**Allocation of Peaking Demand Costs to Months**

| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design Year Peaking Volumes | 2,132 | 41,615 | 397,332 | 170,302 | 18,906 | 2,130 | 2,201 | 2,130 | 2,201 | 2,201 | 2,130 | 2,201 | 645,480 |
| Rank | 9 | 3 | 1 | 2 | 4 | 12 | 8 | 11 | 7 | 6 | 10 | 5 | |
| % Max Month | 0.54% | 10.47% | 100.00% | 42.86% | 4.76% | 0.54% | 0.55% | 0.54% | 0.55% | 0.55% | 0.54% | 0.55% | |
| PR | 0.00% | 1.91% | 57.14% | 16.19% | 1.05% | 0.04% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 76.34% |
| CumPR | 0.04% | 3.00% | 76.34% | 19.20% | 1.10% | 0.04% | 0.05% | 0.04% | 0.05% | 0.05% | 0.04% | 0.05% | 100.00% |
| Peaking Demand Costs | $ 2,450 | $ 164,439 | $ 4,179,865 | $ 1,051,158 | $ 60,120 | $ 2,446 | $ 2,568 | $ 2,446 | $ 2,568 | $ 2,568 | $ 2,446 | $ 2,568 | $ 5,475,642 |

**Northern Utilities**
**Simplified Market Based Allocator (MBA) Calculations**
**ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS**

| | | |
|---|---|---|
| 1 | | |
| 2 | | ` |
| 3 | Pipeline Demand | Schedule 5, PG 1, LN 1 |
| 4 | Storage Demand | Schedule 5, PG 1, LN 2 & 3 |
| 5 | Peaking Demand | Schedule 5, PG 1, LN 4 & 5 |
| 6 | Subtotal Demand | Sum LN 3 : LN 5 |
| 7 | | |
| 8 | Capacity Release (Credit) | Schedule 5A, PG 6 |
| 9 | Asset Management (Credit) | Schedule 5A, PG 6 |
| 10 | Total Net Demand Costs | Sum LN 6 : LN 9 |
| 11 | | |
| 12 | | |
| 13 | **Proportional Responsibility (PR) Allocators** | |
| 14 | | |
| 15 | **Allocation of Product and Pipeline Demand Costs (including Injections) to Months** | |
| 16 | | |
| 17 | Design Year Pipeline Sendout | Company Analysis |
| 18 | Rank | LN 17 Ranking |
| 19 | % Max Month | LN 17 / LN 17 MAX |
| 20 | PR | The difference between LN 19 for the month and LN 19 for next highest rank |
| 21 | CumPR | Cumulative Values, LN 20 |
| 22 | Product and Pipeline Demand Costs | LN 21 * LN 3 |
| 23 | | |
| 24 | **Allocation of Storage Injection Fees to Months** | |
| 25 | | |
| 26 | Storage Injection Volume | Company Analysis |
| 27 | Design Year Pipeline Sendout | LN 17 |
| 28 | % of Deliveries Injected | LN 26 / Sum ( LN 26 : LN 27 ) |
| 29 | Injection Fees | LN 28 * LN 22 |
| 30 | | |
| 31 | **Allocation of Storage Demand Costs to Months** | |
| 32 | | |
| 33 | Design Year Storage | Company Analysis |
| 34 | Rank | LN 33 Ranking |
| 35 | % Max Month | LN 33 / LN 33 MAX |
| 36 | PR | The difference between LN 35 for the month and LN 35 for next highest rank |
| 37 | CumPR | Cumulative Values, LN 36 |
| 38 | Storage Demand Costs | LN 37 * LN 4 |
| 39 | Plus Injection Fees | LN 29 |
| 40 | TOTAL | LN 38 + LN 39 |
| 41 | | |
| 42 | **Allocation of Peaking Demand Costs to Months** | |
| 43 | | |
| 44 | Design Year Peaking Volumes | Company Analysis |
| 45 | Rank | Rank LN 44 |
| 46 | % Max Month | LN 44 / LN 44 MAX |
| 47 | PR | The difference between LN 46 for the month and LN 46 for next highest rank |
| 48 | CumPR | Cumulative Values, LN 47 |
| 49 | Peaking Demand Costs | LN 48 * LN 5 |

## Northern Utilities
## Simplified Market Based Allocator (MBA) Calculations
## ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

| | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipeline & Product Demand | $ 2,205,054 | $ 1,164,506 | $ 1,055,188 | $ 887,248 | $ 1,154,927 | $ 903,607 | $ 369,652 | $ 241,541 | $ 226,611 | $ 231,068 | $ 260,479 | $ 454,976 | $ 9,154,859 |
| Storage Incld Inj Fees | $ - | $ 5,640,532 | $ 7,397,457 | $ 8,622,879 | $ 4,497,439 | $ 22,903 | $ 17,376 | $ 14,758 | $ 15,032 | $ 15,074 | $ 15,076 | $ 18,674 | $ 26,277,201 |
| Peaking | $ 2,450 | $ 164,439 | $ 4,179,865 | $ 1,051,158 | $ 60,120 | $ 2,446 | $ 2,568 | $ 2,446 | $ 2,568 | $ 2,568 | $ 2,446 | $ 2,568 | $ 5,475,642 |
| Less Injection Fees | $ - | $ - | $ - | $ - | $ - | $ (22,903) | $ (17,376) | $ (14,758) | $ (15,032) | $ (15,074) | $ (15,076) | $ (18,674) | $ (118,894) |
| Less: Capacity Release | $ (12,997) | $ (12,997) | $ (12,997) | $ (12,997) | $ (12,997) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (64,987) |
| Less: Asset Mgmt | $ (1,594,167) | $ (1,594,167) | $ (1,594,167) | $ (1,594,167) | $ (1,594,167) | $(1,594,167) | $ - | $ - | $ - | $ - | $ - | $ - | $ (9,565,000) |
| Total Demand | $ 600,340 | $ 5,362,312 | $ 11,025,347 | $ 8,954,121 | $ 4,105,322 | $ (688,113) | $ 372,220 | $ 243,987 | $ 229,179 | $ 233,636 | $ 262,925 | $ 457,544 | $ 31,158,821 |

**Capacity Cost Allocator based on Design Year Firm Sendout**

| | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Therms** | | | | | | | | | | | | | |
| Maine | 853,769 | 1,209,003 | 1,440,732 | 1,303,433 | 1,153,653 | 703,672 | 368,598 | 275,472 | 259,282 | 265,002 | 291,562 | 425,981 | 8,550,159 |
| New Hampshire | 601,557 | 898,446 | 1,099,499 | 945,039 | 803,515 | 439,699 | 255,354 | 182,717 | 174,572 | 176,634 | 193,682 | 292,778 | 6,063,492 |
| Total | 1,455,326 | 2,107,449 | 2,540,231 | 2,248,472 | 1,957,168 | 1,143,371 | 623,952 | 458,189 | 433,854 | 441,636 | 485,244 | 718,759 | 14,613,651 |

| **Percentage of Total** | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maine | 58.67% | 57.37% | 56.72% | 57.97% | 58.95% | 61.54% | 59.07% | 60.12% | 59.76% | 60.00% | 60.09% | 59.27% | 57.58% |
| New Hampshire | 41.33% | 42.63% | 43.28% | 42.03% | 41.05% | 38.46% | 40.93% | 39.88% | 40.24% | 40.00% | 39.91% | 40.73% | 42.42% |
| Total | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

**Allocation of Demand Costs by Division**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maine | $352,190 | $3,076,255 | $6,253,199 | $5,190,679 | $2,419,883 | ($423,490) | $219,888 | $146,690 | $136,963 | $140,193 | $157,980 | $271,169 | $17,941,600 |
| New Hampshire | $248,150 | $2,286,056 | $4,772,148 | $3,763,442 | $1,685,439 | ($264,623) | $152,332 | $97,297 | $92,216 | $93,444 | $104,945 | $186,375 | $13,217,221 |
| Total | $ 600,340 | $ 5,362,312 | $ 11,025,347 | $ 8,954,121 | $ 4,105,322 | $ (688,113) | $ 372,220 | $ 243,987 | $ 229,179 | $ 233,636 | $ 262,925 | $ 457,544 | $ 31,158,821 |

**Detailed Allocation of Demand Costs by Division**

| **Maine** | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipeline & Product Demand | $ 1,293,598 | $ 668,055 | $ 598,467 | $ 514,335 | $ 680,772 | $ 556,113 | $ 218,371 | $ 145,219 | $ 135,429 | $ 138,652 | $ 156,510 | $ 269,647 | $ 5,375,167 | 58.71% |
| Storage Incld Injection Fees | $ - | $ 3,235,865 | $ 4,195,584 | $ 4,998,659 | $ 2,651,016 | $ 14,096 | $ 10,265 | $ 8,873 | $ 8,984 | $ 9,045 | $ 9,058 | $ 11,067 | $ 15,152,512 | 57.66% |
| Peaking | $ 1,437 | $ 94,335 | $ 2,370,676 | $ 609,353 | $ 35,438 | $ 1,505 | $ 1,517 | $ 1,471 | $ 1,535 | $ 1,541 | $ 1,470 | $ 1,522 | $ 3,121,800 | 57.01% |
| Less: Injection Fees | $ - | $ - | $ - | $ - | $ - | $ (14,096) | $ (10,265) | $ (8,873) | $ (8,984) | $ (9,045) | $ (9,058) | $ (11,067) | $ (71,388) | 60.04% |
| Capacity Release (Credit) | $ (7,625) | $ (7,456) | $ (7,372) | $ (7,535) | $ (7,661) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (37,649) | 57.93% |
| Asset Management (Credit) | $ (935,220) | $ (914,543) | $ (904,157) | $ (924,134) | $ (939,682) | $ (981,108) | $ - | $ - | $ - | $ - | $ - | $ - | $ (5,598,843) | 58.53% |
| **Total Allocated Demand** | $ 352,190 | $ 3,076,255 | $ 6,253,199 | $ 5,190,679 | $ 2,419,883 | $ (423,490) | $ 219,888 | $ 146,690 | $ 136,963 | $ 140,193 | $ 157,980 | $ 271,169 | $ 17,941,600 | 57.58% |

| **New Hampshire** | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Annual | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipeline & Product Demand | $ 911,456 | $ 496,451 | $ 456,722 | $ 372,913 | $ 474,155 | $ 347,495 | $ 151,281 | $ 96,322 | $ 91,183 | $ 92,417 | $ 103,968 | $ 185,329 | $ 3,779,692 | 41.29% |
| Storage Incld Injection Fees | $ - | $ 2,404,667 | $ 3,201,873 | $ 3,624,220 | $ 1,846,423 | $ 8,808 | $ 7,111 | $ 5,885 | $ 6,049 | $ 6,029 | $ 6,017 | $ 7,606 | $ 11,124,689 | 42.34% |
| Peaking | $ 1,013 | $ 70,103 | $ 1,809,189 | $ 441,804 | $ 24,682 | $ 941 | $ 1,051 | $ 975 | $ 1,033 | $ 1,027 | $ 976 | $ 1,046 | $ 2,353,841 | 42.99% |
| Less: Injection Fees | $ - | $ - | $ - | $ - | $ - | $ (8,808) | $ (7,111) | $ (5,885) | $ (6,049) | $ (6,029) | $ (6,017) | $ (7,606) | $ (47,506) | |
| Capacity Release | $ (5,372) | $ (5,541) | $ (5,626) | $ (5,463) | $ (5,336) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (27,338) | 42.07% |
| Asset Management | $ (658,947) | $ (679,624) | $ (690,010) | $ (670,033) | $ (654,485) | $ (613,059) | $ - | $ - | $ - | $ - | $ - | $ - | $ (3,966,157) | 41.47% |
| **Total Allocated Demand** | $ 248,150 | $ 2,286,056 | $ 4,772,148 | $ 3,763,442 | $ 1,685,439 | $ (264,623) | $ 152,332 | $ 97,297 | $ 92,216 | $ 93,444 | $ 104,945 | $ 186,375 | $ 13,217,221 | 42.42% |

## Northern Utilities
## Simplified Market Based Allocator (MBA) Calculations
## ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

| | | |
|---|---|---|
| 50 | Pipeline & Product Demand | LN 22 |
| 51 | Storage | LN 40 |
| 52 | Peaking | LN 49 |
| 53 | Less: Injection Fees | -(LN 29) |
| 54 | Less: Capacity Release | -(LN 8 / 5) |
| 55 | Less: Asset Management | -(LN 9 / 6) |
| 56 | Total Demand | Sum ( LN 50 : LN 55 ) |
| 57 | | |
| 58 | **Capacity Cost Allocator based on Design Year Firm Sendout** | |
| 59 | | |
| 60 | **Therms** | |
| 61 | Maine | Company Analysis |
| 62 | New Hampshire | Company Analysis |
| 63 | Total | LN 61 + LN 62 |
| 64 | **Percentage of Total** | |
| 65 | Maine | LN 61 / LN 63 |
| 66 | New Hampshire | LN 62 / LN 63 |
| 67 | Total | LN 65 + LN 66 |
| 68 | | |
| 69 | **Allocation of Demand Costs by Division** | |
| 70 | Maine | LN 56 * LN 65 |
| 71 | New Hampshire | LN 56 * LN 66 |
| 72 | Total | LN 70 + LN 71 |
| 73 | **Detailed Allocation of Demand Costs by Division** | |
| 74 | **Maine** | |
| 75 | Pipeline & Product Demand | LN 50 * LN 65 |
| 76 | Storage | LN 51 * LN 65 |
| 77 | Peaking | LN 52 * LN 65 |
| 78 | Injection Fees | LN 53 * LN 65 |
| 79 | Capacity Release (Credit) | LN 54 * LN 65 |
| 80 | Asset Management (Credit) | LN 55 * LN 65 |
| 81 | **Total Allocated Demand** | Sum ( LN 75 : LN 80 ) |
| 82 | | |
| 83 | **New Hampshire** | |
| 84 | Pipeline & Product Demand | LN 50 * LN 66 |
| 85 | Storage | LN 51 * LN 66 |
| 86 | Peaking | LN 52 * LN 66 |
| 87 | Injection Fees | LN 53 * LN 66 |
| 88 | Capacity Release | LN 54 * LN 66 |
| 89 | Asset Management (Credit) | LN 55 * LN 66 |
| 90 | **Total Allocated Demand** | Sum ( LN 84 : LN 89 ) |

# Schedule 22

**Northern Utilities**
**ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS**

| | | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Supply Volumes - MMBtu** | | | | | | | | |
| 2 | Total Pipeline | 1,050,509 | 1,219,835 | 1,156,065 | 1,070,794 | 1,067,603 | 777,347 | 8,817,574 | 6,342,153 |
| 3 | Total Storage | 11,091 | 341,716 | 602,435 | 581,355 | 204,810 | 0 | 1,741,407 | 1,741,407 |
| 4 | Total Peaking | 2,132 | 2,203 | 236,102 | 4,855 | 14,161 | 2,130 | 274,648 | 261,584 |
| 5 | Total Off-system Sales | | | | | | | 0 | 0 |
| 6 | Subtotal | 1,063,732 | 1,563,755 | 1,994,602 | 1,657,004 | 1,286,574 | 779,477 | 10,833,629 | 8,345,144 |
| 7 | Less Interruptible - Maine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | Less Interruptible - New Hampshire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Total Firm Supply | 1,063,732 | 1,563,755 | 1,994,602 | 1,657,004 | 1,286,574 | 779,477 | 10,833,629 | 8,345,144 |
| 10 | Total Firm Pipeline Sendout | 1,050,509 | 1,219,835 | 1,156,065 | 1,070,794 | 1,067,603 | 777,347 | 8,817,574 | 6,342,153 |
| 11 | **Variable Costs** | | | | | | | | |
| 12 | Pipeline Costs Modeled in Sendout™ | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| 13 | NYMEX Price Used for Forecast | $2.741 | $2.897 | $3.007 | $3.010 | $2.977 | $2.843 | | |
| 14 | NYMEX Price Used for Update | $2.741 | $2.897 | $3.007 | $3.010 | $2.977 | $2.843 | | |
| 15 | Increase/(Decrease) NYMEX Price | $0.000 | $0.000 | $0.000 | $0.000 | $0.000 | $0.000 | | |
| 16 | Increase/(Decrease) in Pipeline Costs | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 17 | Total Updated Pipeline Costs | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| 18 | | | | | | | | | |
| 19 | Total Pipeline | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| 20 | Total Storage | $ 36,672 | $ 1,129,911 | $ 1,897,950 | $ 1,818,556 | $ 566,612 | $ - | $ 5,449,700 | $ 5,449,700 |
| 21 | Total Peaking | $ 22,369 | $ 22,727 | $ 2,554,233 | $ (421,848) | $ 104,416 | $ 24,771 | $ 2,452,739 | $ 2,306,669 |
| 22 | Total Off-sytem Sales | $ - | | | | $ - | | $ - | $ - |
| 23 | | | | | | | | | |
| 24 | Subtotal | $ 5,806,213 | $ 8,267,040 | $ 11,935,197 | $ 8,346,711 | $ 6,951,110 | $ 2,361,606 | $ 49,969,384 | $ 43,667,878 |
| 25 | | | | | | | | | |
| 26 | Hedging Expense & (Gain)/Loss Estimate | | | | | | | | |
| 27 | NYMEX Options Contracts | | | | | | | | |
| 28 | Number of contracts | 27 | 42 | 52 | 41 | 33 | - | 195 | 195 |
| 29 | Option Contract Price | $ 0.1050 | $ 0.1080 | $ 0.1100 | $ 0.1030 | $ 0.1050 | | | |
| 30 | Hedging Expense | $ 28,350 | $ 45,360 | $ 57,200 | $ 42,230 | $ 34,650 | | $ 207,790 | $ 207,790 |
| 31 | NYMEX Option Strike Price | $ 5.700 | $ 6.000 | $ 6.500 | $ 6.250 | $ 6.500 | $ - | | |
| 32 | NYMEX Price Used for Forecast | $ 2.741 | $ 2.897 | $ 3.007 | $ 3.010 | $ 2.977 | | | |
| 33 | Strike Price Hit | No | No | No | No | No | | | |
| 34 | Option Hedging Gain (Credit) | $ - | $ - | $ - | $ - | $ - | | $ - | $ - |
| 35 | Total Option Cost | $ 28,350 | $ 45,360 | $ 57,200 | $ 42,230 | $ 34,650 | $ - | $ 207,790 | $ 207,790 |
| 36 | | | | | | | | | |
| 37 | Interruptible Cost Estimate | | | | | | | | |
| 38 | Variable Pipeline Costs Excld Hedges | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| 39 | Average Supply Cost ($/MMBtu) | $ 5.471 | $ 5.832 | $ 6.473 | $ 6.491 | $ 5.882 | $ 3.006 | | |
| 40 | Interruptible Cost - Maine | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 41 | Interruptible Cost - New Hampshire | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 42 | | | | | | | | | |
| 43 | Firm Sales Pipeline Commodity Excld Hedge | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| 44 | Total Storage | $ 36,672 | $ 1,129,911 | $ 1,897,950 | $ 1,818,556 | $ 566,612 | $ - | $ 5,449,700 | $ 5,449,700 |
| 45 | Total Peaking | $ 22,369 | $ 22,727 | $ 2,554,233 | $ (421,848) | $ 104,416 | $ 24,771 | $ 2,452,739 | $ 2,306,669 |
| 46 | Off-system Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 47 | Firm Sales Variable Costs Excld Hedge | $ 5,806,213 | $ 8,267,040 | $ 11,935,197 | $ 8,346,711 | $ 6,951,110 | $ 2,361,606 | $ 49,969,384 | $ 43,667,878 |
| 48 | Plus Net Hedging Expense / (Gain) | $ 28,350 | $ 45,360 | $ 57,200 | $ 42,230 | $ 34,650 | $ - | $ 207,790 | $ 207,790 |
| 49 | Total Firm Sales Variable Costs | $ 5,834,563 | $ 8,312,400 | $ 11,992,397 | $ 8,388,941 | $ 6,985,760 | $ 2,361,606 | $ 50,177,174 | $ 43,875,668 |

## Northern Utilities
## ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

| | | |
|---|---|---|
| 1 | Supply Volumes - MMBtu | |
| 2 | Total Pipeline | Attachment NUI-FXW-6, Page 2 |
| 3 | Total Storage | Attachment NUI-FXW-6, Page 2 |
| 4 | Total Peaking | Attachment NUI-FXW-6, Page 2 |
| 5 | Total Off-system Sales | Attachment NUI-FXW-6, Page 2 |
| 6 | Subtotal | SUM LN 2: LN 4 |
| 7 | Less Interruptible - Maine | Company Analysis |
| 8 | Less Interruptible - New Hampshire | Company Analysis |
| 9 | Total Firm Supply | LN 6 - LN 7 - LN 8 |
| 10 | Total Firm Pipeline Sendout | LN 2 - LN 7 - LN 8 |
| 11 | Variable Costs | |
| 12 | Pipeline Costs Modeled in Sendout™ | Attachment NUI-FXW-6, Page 1 |
| 13 | NYMEX Price Used for Forecast | Attachment NUI-FXW-10, Page 1 |
| 14 | NYMEX Price Used for Update | Attachment NUI-FXW-10, Page 1 |
| 15 | Increase/(Decrease) NYMEX Price | LN 14 - LN 13 |
| 16 | Increase/(Decrease) in Pipeline Costs | LN 2 * LN 15 |
| 17 | Total Updated Pipeline Costs | LN 16 + LN 12 |
| 18 | | |
| 19 | Total Pipeline | LN 17 |
| 20 | Total Storage | LN 3 |
| 21 | Total Peaking | LN 4 |
| 22 | Total Off-sytem Sales | LN 5 |
| 23 | | |
| 24 | Subtotal | Sum LN 18 : LN 20 |
| 25 | | |
| 26 | Hedging Expense & (Gain)/Loss Estimate | |
| 27 | NYMEX Options Contracts | |
| 28 | Number of contracts | Attachment NUI-FXW-9 |
| 29 | Option Contract Price | Attachment NUI-FXW-9 |
| 30 | Hedging Expense | Attachment NUI-FXW-9 |
| 31 | NYMEX Option Strike Price | Attachment NUI-FXW-9 |
| 32 | NYMEX Price Used for Forecast | Line 13 |
| 33 | NYMEX Price Used for Update | Line 14 |
| 34 | Option Hedging Gain (Credit) | LN 33 - LN 32 |
| 35 | Total Option Cost | ( LN 31 - LN 32 - LN 34) * LN 28*10,000 |
| 36 | | |
| 37 | Interruptible Cost Estimate | |
| 38 | Variable Pipeline Costs Excld Hedges | LN 17 |
| 39 | Average Supply Cost ($/MMBtu) | LN 38 / LN 2 |
| 40 | Interruptible Cost - Maine | LN 39 * LN 7 |
| 41 | Interruptible Cost - New Hampshire | LN 39 * LN 8 |
| 42 | | |
| 43 | Firm Sales Pipeline Commodity Excld Hedge | LN 38 - LN 40 - LN 41 |
| 44 | Total Storage | LN 20 |
| 45 | Total Peaking | LN 21 |
| 46 | Off-system Sales | LN 22 |
| 47 | Firm Sales Variable Costs Excld Hedge | Sum LN 43 : LN 46 |
| 48 | Plus Net Hedging Expense / (Gain) | LN 35 |
| 49 | Total Firm Sales Variable Costs | LN 47 + LN 48 |

## Northern Utilities
## ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

**Commodity Allocation Factors**

Firm Sales Sendout for Normal Winter, MMBtu

| | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|
| Maine | 632,152 | 927,978 | 1,191,973 | 986,019 | 769,305 | 474,620 | 6,466,209 | 4,982,047 |
| New Hampshire | 431,580 | 635,777 | 802,629 | 670,985 | 517,269 | 304,857 | 4,367,420 | 3,363,097 |
| Total | 1,063,732 | 1,563,755 | 1,994,602 | 1,657,004 | 1,286,574 | 779,477 | 10,833,629 | 8,345,144 |
| | | | | | | | | |
| **Percentage of Total** | | | | | | | | |
| Maine | 59.43% | 59.34% | 59.76% | 59.51% | 59.79% | 60.89% | 59.69% | 59.70% |
| New Hampshire | 40.57% | 40.66% | 40.24% | 40.49% | 40.21% | 39.11% | 40.31% | 40.30% |
| Total | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

**Commodity Allocation by Jurisdiction**

| | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | Annual | Winter |
|---|---|---|---|---|---|---|---|---|
| **Maine** | | | | | | | | |
| Firm Sales Pipeline Commodity Excld Hedge | $ 3,415,415 | $ 4,221,895 | $ 4,471,845 | $ 4,135,678 | $ 3,755,166 | $ 1,422,888 | $ 25,099,055 | $ 21,422,887 |
| Net Hedging Expense / (Gain) | $ 16,848 | $ 26,918 | $ 34,183 | $ 25,129 | $ 20,719 | $ - | $ 123,797 | $ 123,797 |
| Storage | $ 21,793 | $ 670,522 | $ 1,134,214 | $ 1,082,152 | $ 338,805 | $ - | $ 3,247,486 | $ 3,247,486 |
| Peaking | $ 13,293 | $ 13,487 | $ 1,526,408 | $ (251,026) | $ 62,436 | $ 15,083 | $ 1,466,324 | $ 1,379,682 |
| Off-system Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Total Maine Commodity Costs | $ 3,467,350 | $ 4,932,822 | $ 7,166,650 | $ 4,991,934 | $ 4,177,125 | $ 1,437,971 | $ 29,936,662 | $ 26,173,852 |
| Maine Inventory Finance Costs | $ 598 | $ 973 | $ 1,315 | $ 1,063 | $ 768 | $ 397 | $ 5,114 | $ 5,114 |
| Total Maine Variable Costs | $ 3,467,948 | $ 4,933,795 | $ 7,167,965 | $ 4,992,997 | $ 4,177,893 | $ 1,438,368 | $ 29,941,777 | $ 26,178,966 |
| **New Hampshire** | | | | | | | | |
| Firm Sales Pipeline Commodity Excld Hedge | $ 2,331,757 | $ 2,892,508 | $ 3,011,169 | $ 2,814,325 | $ 2,524,916 | $ 913,947 | $ 16,967,890 | $ 14,488,622 |
| Net Hedging Expense / (Gain) | $ 11,502 | $ 18,442 | $ 23,017 | $ 17,101 | $ 13,931 | $ - | $ 83,993 | $ 83,993 |
| Storage | $ 14,879 | $ 459,389 | $ 763,736 | $ 736,404 | $ 227,807 | $ - | $ 2,202,214 | $ 2,202,214 |
| Peaking | $ 9,076 | $ 9,240 | $ 1,027,825 | $ (170,823) | $ 41,981 | $ 9,688 | $ 986,414 | $ 926,987 |
| Off-system Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Total New Hampshire Commodity Costs | $ 2,367,214 | $ 3,379,579 | $ 4,825,748 | $ 3,397,007 | $ 2,808,635 | $ 923,635 | $ 20,240,512 | $ 17,701,817 |
| New Hampshire Inventory Finance Costs | $ 416 | $ 672 | $ 890 | $ 727 | $ 521 | $ 257 | $ 3,483 | $ 3,483 |
| Total New Hampshire Variable Costs | $ 2,367,630 | $ 3,380,251 | $ 4,826,637 | $ 3,397,734 | $ 2,809,156 | $ 923,892 | $ 20,243,994 | $ 17,705,300 |
| **Northern Utilities** | | | | | | | | |
| Firm Sales Pipeline Commodity Excld Hedge | $ 5,747,172 | $ 7,114,402 | $ 7,483,015 | $ 6,950,003 | $ 6,280,082 | $ 2,336,835 | $ 42,066,945 | $ 35,911,509 |
| Net Hedging Expense / (Gain) | $ 28,350 | $ 45,360 | $ 57,200 | $ 42,230 | $ 34,650 | $ - | $ 207,790 | $ 207,790 |
| Storage | $ 36,672 | $ 1,129,911 | $ 1,897,950 | $ 1,818,556 | $ 566,612 | $ - | $ 5,449,700 | $ 5,449,700 |
| Peaking | $ 22,369 | $ 22,727 | $ 2,554,233 | $ (421,848) | $ 104,416 | $ 24,771 | $ 2,452,739 | $ 2,306,669 |
| Off-system Sales | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Total Northern Commodity Costs | $ 5,834,563 | $ 8,312,400 | $ 11,992,397 | $ 8,388,941 | $ 6,985,760 | $ 2,361,606 | $ 50,177,174 | $ 43,875,668 |
| Northern Inventory Finance Costs | $ 1,014 | $ 1,645 | $ 2,205 | $ 1,790 | $ 1,289 | $ 654 | $ 8,597 | $ 8,597 |
| Total Northern Variable Costs | $ 5,835,577 | $ 8,314,046 | $ 11,994,602 | $ 8,390,731 | $ 6,987,049 | $ 2,362,261 | $ 50,185,771 | $ 43,884,265 |

## Northern Utilities
## ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

| | | |
|---|---|---|
| 50 | **Commodity Allocation Factors** | |
| 51 | Firm Sales Sendout for Normal Winter, MMBtu | |
| 52 | | |
| 53 | Maine | NUI-CAK-3, LN 33/10 |
| 54 | New Hampshire | Company Analysis |
| 55 | Total | LN 53 + LN 54 |
| 56 | | |
| 57 | **Percentage of Total** | |
| 58 | Maine | LN 53 / LN 55 |
| 59 | New Hampshire | LN 54 / LN 55 |
| 60 | Total | LN 58 + LN 59 |
| 61 | | |
| 62 | **Commodity Allocation by Jurisdiction** | |
| 63 | **Maine** | |
| 64 | Firm Sales Pipeline Commodity Excld Hedge | LN 43 * LN 58 |
| 65 | Net Hedging Expense / (Gain) | LN 35 * LN 58 |
| 66 | Storage | LN 44 * LN 58 |
| 67 | Peaking | LN 45 * LN 58 |
| 68 | Off-system Sales | LN 46 * LN 58 |
| 69 | Total Maine Commodity Costs | Sum LN 64 : LN 68 |
| 70 | Maine Inventory Finance Costs | LN 111 |
| 71 | Total Maine Variable Costs | LN 69 + LN 70 |
| 72 | **New Hampshire** | |
| 73 | Firm Sales Pipeline Commodity Excld Hedge | LN 43 * LN 59 |
| 74 | Net Hedging Expense / (Gain) | LN 35 * LN 59 |
| 75 | Storage | LN 44 * LN 59 |
| 76 | Peaking | LN 45 * LN 59 |
| 77 | Off-system Sales | LN 46 * LN 59 |
| 78 | Total New Hampshire Commodity Costs | Sum LN 73 : LN 77 |
| 79 | New Hampshire Inventory Finance Costs | LN 116 |
| 80 | Total New Hampshire Variable Costs | LN 78 + LN 79 |
| 81 | **Northern Utilities** | |
| 82 | Firm Sales Pipeline Commodity Excld Hedge | LN 64 + LN 73 |
| 83 | Net Hedging Expense / (Gain) | LN 65 + LN 74 |
| 84 | Storage | LN 66 + LN 75 |
| 85 | Peaking | LN 67 + LN 76 |
| 86 | Off-system Sales | LN 68 + LN 77 |
| 87 | Total Northern Commodity Costs | LN 69 + LN 78 |
| 88 | Northern Inventory Finance Costs | LN 70 + LN 79 |
| 89 | Total Northern Variable Costs | LN 87 + LN 88 |
| 90 | | |

**Northern Utilities**
**ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS**

## Northern Utilities
## Simplified Market Based Allocator (MBA) Calculations
## ALLOCATION OF NORTHERN INVENTORY FINANCE CHARGE

| Col A | Col B | Col C | Col D | Col E | Col F | Col G | Col N | Col O |
|---|---|---|---|---|---|---|---|---|
| **Inventory Finance Charge** | **Nov-15** | **Dec-15** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **Annual** | |
| Storage | $ 728 | $ 728 | $ 629 | $ 422 | $ 196 | $ 135 | $ 5,718 | |
| Peaking | $ 218 | $ 217 | $ 235 | $ 244 | $ 242 | $ 249 | $ 2,879 | |
| Total | $ 946 | $ 945 | $ 865 | $ 666 | $ 439 | $ 384 | $ 8,597 | |
| | | | | | | | | |
| **Inventory Finance Charge Allocation by Jurisdiction** | | | | | | | | |
| Maine | $ 562 | $ 561 | $ 517 | $ 396 | $ 262 | $ 234 | $ 5,114 | |
| New Hampshire | $ 384 | $ 384 | $ 348 | $ 270 | $ 176 | $ 150 | $ 3,483 | |
| Total | $ 946 | $ 945 | $ 865 | $ 666 | $ 439 | $ 384 | $ 8,597 | |
| | | | | | | | | |
| **Inventory Finance Charge Allocation by Month** | | | | | | | | |
| **Maine** | | | | | | | | |
| Firm Sales Normal Remaining Sendout | 461,809 | 751,957 | 1,015,952 | 821,354 | 593,284 | 306,709 | 3,951,065 | 3,951,065 |
| Monthly % Sendout of Total Winter | 11.69% | 19.03% | 25.71% | 20.79% | 15.02% | 7.76% | 100.00% | 100.00% |
| ME Allocated Inventory Finance Charge | $ 598 | $ 973 | $ 1,315 | $ 1,063 | $ 768 | $ 397 | $ 5,114 | $ 5,114 |
| | | | | | | | | |
| **New Hampshire** | | | | | | | | |
| Firm Sales Normal Remaining Sendout | 315,946 | 510,439 | 675,586 | 552,138 | 395,583 | 195,532 | 2,645,222 | 2,645,222 |
| Monthly % Sendout of Total Winter | 11.94% | 19.30% | 25.54% | 20.87% | 14.95% | 7.39% | 100.00% | 100.00% |
| NH Allocated Inventory Finance Charge | $ 416 | $ 672 | $ 890 | $ 727 | $ 521 | $ 257 | $ 3,483 | $ 3,483 |

## Northern Utilities
## ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

| | | |
|---|---|---|
| 91 | **Northern Utilities** | |
| 92 | **Simplified Market Based Allocator (MBA) Calculations** | |
| 93 | **ALLOCATION OF NORTHERN INVENTORY FINANCE CHARGE** | |
| 94 | | |
| 95 | | |
| 96 | | |
| 97 | **Inventory Finance Charge** | |
| 98 | Storage | Attachment NUI-CAK-7 - 'Carrying Costs' |
| 99 | Peaking | Attachment NUI-CAK-7 - 'Carrying Costs' |
| 100 | Total | Sum LN 98 : LN 199 |
| 101 | | |
| 102 | **Inventory Finance Charge Allocation by Jurisdiction** | |
| 103 | Maine | LN 100 * LN 58 |
| 104 | New Hampshire | LN 100 * LN 59 |
| 105 | Total | Sum LN 103 : LN 104 |
| 106 | | |
| 107 | **Inventory Finance Charge Allocation by Month** | |
| 108 | **Maine** | |
| 109 | Firm Sales Remaining Sendout | Attachment NUI-CAK-3, LN 80/10 |
| 110 | Monthly % Sendout of Total Winter | LN 109 / LN 109 Col N |
| 111 | ME Allocated Inventory Finance Charge | LN 103 Col N * LN 110 |
| 112 | | |
| 113 | **New Hampshire** | |
| 114 | Firm Sales Remaining Sendout | Company Analysis |
| 115 | Monthly % Sendout of Total Winter | LN 114 / LN 114 Col N |
| 116 | NH Allocated Inventory Finance Charge | LN 104 Col N* LN 115 |

# Schedule 23

Northern Utilities - NEW HAMPSHIRE DIVISION
Supporting Detail
Average Cost of Gas Calculation - Residential Reallocations

| | | Winter | Summer | Annual | |
|---|---|---|---|---|---|
| 1 | Demand | $ 5,145,991 | $ 799,203 | $ 5,945,194 | Schedule 1A, LN 81 |
| 2 | Commodity | $ 17,705,300 | $ 2,538,695 | $ 20,243,994 | Schedule 1B, LN 43 |
| 3 | Total | $ 22,851,291 | $ 3,337,898 | $ 26,189,189 | LN 1 + LN 2 |
| 4 | | | | | |
| 5 | Forecasted Firm Sales (Therms) | 33,294,125 | 9,940,234 | 43,234,360 | Schedule 10B, LN 11 |
| 6 | Forecasted Residential Sales (Therms) | 14,977,297 | 3,470,624 | 18,447,921 | Schedule 10B, LN 3 |
| 7 | Average Residential Rate: | **Winter** | **Summer** | **Annual** | |
| 8 | Average Demand Rate | $0.1546 | $0.0804 | | LN 1 / LN 5 |
| 9 | Average Commodity Rate | $0.5318 | $0.2554 | | LN 2 / LN 5 |
| 10 | Average Rate | $0.6863 | $0.3358 | | LN 3 / LN 5 |
| 11 | | | | | |
| 12 | **Residential Reallocation:** | **Winter** | **Summer** | **Annual** | |
| 13 | Demand Costs Allocated To Residential per SMBA | $ 2,387,868 | $ 327,186 | $ 2,715,054 | Schedule 10A, LN 168 |
| 14 | Demand Costs Allocated To Residential per Avg Res. Rate | $ 2,314,914 | $ 279,038 | $ 2,593,952 | LN 8 * LN 6 |
| 15 | **Demand Reallocation:** | $ 72,954 | $ 48,148 | $ 121,101 | LN 13 - LN 14 |
| 16 | **HLF Allocation** | $ 9,361 | $ 16,476 | $ 25,837 | LN 15 / LN 20 |
| 17 | **LLF Allocation** | $ 63,592 | $ 31,672 | $ 95,264 | LN 15 / LN 21 |
| 18 | | | | | |
| 19 | **SMBA Capacity Cost Allocation (%)** | | | | |
| 20 | HLF | 12.83% | 34.22% | | Schedule 10A, LN 173 |
| 21 | LLF | 87.17% | 65.78% | | Schedule 10A, LN 174 |
| 22 | | | | | |
| 23 | Commodity Costs Allocated To Residential per SMBA | $ 7,920,876 | $ 886,383 | $ 8,807,259 | Schedule 10C, LN 138 |
| 24 | Commodity Costs Allocated To Residential per Avg Res. Rate | $ 7,964,694 | $ 886,397 | $ 8,851,092 | LN 9 * LN 6 |
| 25 | **Commodity Reallocation:** | $ (43,818) | $ (14) | $ (43,833) | LN 23 - LN 24 |
| 26 | **HLF Allocation** | $ (8,212) | $ (8) | $ (8,220) | LN 25 * LN 30 |
| 27 | **LLF Allocation** | $ (35,606) | $ (7) | $ (35,613) | LN 25 * LN 31 |
| 28 | | | | | |
| 29 | **SMBA Commodity Cost Allocation (%)** | | | | |
| 30 | HLF | 18.74% | 53.75% | | Schedule 10C, LN 143 |
| 31 | LLF | 81.26% | 46.25% | | Schedule 10C, LN 144 |

# Schedule 24

**Northern Utilities, Inc.**
**Short-Term Debt Limit**
**($ in thousands)**

| **NU Short-Term Debt Limit Calculation (11/1/15 - 10/31/2016)** | | | |
|---|---|---|---|
| *Fuel Financing Purposes* | | | |
| NU ME winter gas costs | | 29,640 | |
| NU NH winter gas costs | | 22,420 | |
| | Total | 52,060 | |
| 30% of total winter gas costs | | 15,618 | (a) |
| *Non-Fuel Financing Purposes* | | | |
| Estimated net utility plant @ 12/31/15 before plant acquisition adjustment | | 348,086 | |
| 15% of Net Utility Plant | | 52,213 | (b) |
| *Short-Term Debt Limit* | | | |
| **Short Term Debt Limit** | | **67,831** | (a) + (b) |

# Schedule 25

Northern Utilities - New Hampshire Division
PNGTS Refund - Year 1

| | Total Refund A | Year 1 Refund Total B = A * .5 | Year 1 Refund Marketer Portion* C | Year 1 Refund Sales Portion D= B - C | Year 1 Summer Refund - Sales** E | Year 1 Winter Refund - Sales F = D - E | Litigation Expenses*** G | Net Year 1 Winter Refund H = F + G |
|---|---|---|---|---|---|---|---|---|
| Winter Contract | $ 10,060,892.88 | $ 5,030,446.44 | $ 176,267.02 | $ 4,854,179.42 | $91,377 | $4,762,802 | ($1,947) | $4,760,855 |
| Annual Contract | $ 359,416.47 | $ 179,708.24 | $ 6,296.98 | $ 173,411.25 | $53,902 | $119,509 | | $119,509 |
| Total | $ 10,420,309.36 | $ 5,210,154.68 | $ 182,564.00 | $ 5,027,590.68 | $145,279 | $4,882,312 | | $4,880,364 |

*: Provided in Schedule 5B, Page 6.
**: Provided in 2015 Summer COG - Revised Filing.
***: Reflects NH portion of final invoice for litigation expenses less amount assigned to marketers.